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Energy statistics

Report of the Secretary-General

Summary

The present report was prepared at the request of the Statistical Commission at its thirty-sixth session.[a] The report summarizes the conclusions and recommendations of the ad hoc expert working group on energy statistics, which met in New York, from 23 to 25 May 2005, as they were approved by the Bureau of the Commission, including the draft terms of reference of the recommended city group and intersecretariat working group on energy statistics.

The Commission may wish to provide further guidance to the work of the city group and the intersecretariat working group on energy statistics, taking into account the report of Statistics Norway on energy statistics entitled "Oil statistics: a discussion of quality components" (E/CN.3/2006/11) and the two background documents that contain the report of the ad hoc expert working group and the city group on energy statistics.

[a] *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24).

* E/CN.3/2006/1.

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I. Introduction

1. The Statistical Commission at its thirty-sixth session[1] discussed the report of the programme reviewer, Statistics Norway, on energy statistics (E/CN.3/2005/3).

2. The Commission recommended that, given the wide range of technical and other issues covered by the programme review, the Statistics Division convene an ad hoc expert working group to (a) outline priorities for tackling these issues; (b) identify the most appropriate forums within which to address these issues (for example, the city group, group of Friends of the Chair or intersecretariat working group), including relationships with existing bodies; and (c) report back to the Bureau of the Commission with an outline of a specific mandate and recommendations with a timetable.

3. The Commission authorized its Bureau to implement the recommendations of the ad hoc expert working group and to ensure that the implementation of concrete measures began before the next session of the Commission.

II. The meeting of the ad hoc expert working group on energy statistics

4. Following the request of the Commission, the Statistics Division convened the ad hoc expert working group on energy statistics from 23 to 25 May 2005.

5. Seven countries (Canada, China, Denmark, Norway, South Africa, the United States of America and Yemen) and five organizations (Eurostat, the International Atomic Energy Agency, the International Energy Agency, the Oak Ridge National Laboratory Carbon Dioxide Information and Analysis Center and the Department of Economic and Social Affairs) participated. The meeting was opened by Paul Cheung, Director of the Statistics Division. Olav Ljones of Statistics Norway chaired the meeting.

6. The agenda of the meeting and the synoptic table of the issues discussed will be made available to the Commission as background documents.

III. Conclusions of the meeting

7. The meeting agreed on the following main conclusions:

(a) The significance of energy to society, the economy and the environment creates special requirements for energy statistics;

(b) There is a need to strengthen official energy statistics and their link to economic, social and environment statistics at both the national and international levels;

(c) To this end, the community of energy statisticians have to be brought together;

(d) Internationally agreed standard concepts, methods, classifications and definitions for energy statistics have to be developed on the basis of existing guidelines and best practices;

(e) The collaboration of international organizations engaged in energy statistics has to be strengthened;

(f) Training and capacity-building in energy statistics, especially in developing countries, have to be increased.

IV. Recommendations of the meeting

8. To achieve the goal of improving the quality of energy statistics at the national and international levels to better meet the requirements of the users, there is a need to:

(a) Develop global international standards for official energy statistics;

(b) Strengthen official energy statistics as part of the system of national statistics;

(c) Adopt performance measures for countries;

(d) Formalize international collaboration and coordination to reduce response burden and make the most efficient use of existing resources;

(e) Create an international community of energy statisticians.

9. This work should be carried out by two complementary working groups, a city group to contribute to the development of improved methods and international standards for national official energy statistics and an intersecretariat working group to enhance international collaboration and coordination.

10. The meeting agreed on the draft terms of reference of the city group and the intersecretariat working group.

11. The meeting stressed the need for adequate resources for energy statistics at both the national and international levels. It emphasized this need in particular in the case of the Statistics Division.

V. Draft terms of reference of the city group on energy statistics

12. The objective of the city group is to address methodological issues related to energy statistics and contribute to improved international standards and improved methods for official energy statistics by pooling expertise in the energy community.

13. In addressing these issues, the city group should, as a priority:

(a) Identify users' needs;

(b) Define the scope of official energy statistics;

(c) Identify and collect national and international best practices;

(d) Review and contribute to the updating of the United Nations handbooks and manuals on energy statistics;

(e) Identify gaps in the coverage of existing methodologies and develop methodologies to cover gaps;

(f) Adopt links or develop bridges to international standard concepts and classifications in economic/environmental statistics to facilitate the integration and interface of energy statistics with other statistical systems;

(g) Recommend a core set of tables as minimum requirements at the national and international level to satisfy the major users' needs.

14. Members of the city group should be invited from the following circles:

(a) Energy statistics experts from national statistical offices and/or energy ministries/authorities;

(b) Experts from international organizations engaged in energy statistics;

(c) Experts from academia: energy sciences, energy economics, statistics;

(d) Energy experts from the private sector on an ad hoc basis as advisers.

15. The time frame in which to implement these tasks is five years, from 2006 to 2010.

16. The suggested working methods for the city group are electronic discussions and annual meetings.

17. The city group will report annually to the Commission.

VI. Draft terms of reference of the intersecretariat working group on energy statistics

18. The objective of the intersecretariat working group on energy statistics is to enhance the coordination of international energy statistics and the collaboration of international (global, regional and sectoral) organizations with a view to improving the availability and quality of international energy statistics without increasing the response burden on countries and by making best use of resources.

19. In addressing these issues, the intersecretariat working group will give priority to:

(a) Making an inventory of the current data collection, processing and dissemination system of the major organizations working on energy statistics;

(b) Reducing the reporting burden by harmonizing data collection, processing and dissemination, by limiting duplication and/or by building links/bridges between existing energy statistics questionnaires, concepts, methods and timetables;

(c) Improving sharing of the collecting/processing work between organizations and enhancing data-sharing and data transmission once data validation procedures have been agreed and implemented;

(d) Improving the coordination of energy statistics with social, economic and environmental statistics at the international level;

(e) Promoting training and capacity-building and coordinating the related efforts;

(f) Creating joint forums to promote the dialogue of statisticians and the user community;

(g) Raising the profile of energy statistics and energy statisticians at all levels.

20. International organizations and agencies engaged in the collection of energy statistics from countries at the global, regional and sectoral levels and major users of international energy statistics should be invited to join the intersecretariat working group.

21. The intersecretariat working group will act as a permanent body and will report to the Commission periodically.

22. The secretariat of the intersecretariat working group will rotate among the members biennially.

VII. Decision of the Bureau of the Statistical Commission

23. The report of the ad hoc expert working group on energy statistics was submitted to the Bureau of the Commission on 21 July 2005.

24. On 3 August 2005, the Bureau of the Commission approved the conclusions and recommendations of the ad hoc expert working group on energy statistics, including the draft terms of reference for the city group and the intersecretariat working group on energy statistics.

VIII. Actions following the decision of the Bureau

25. A preparatory discussion of the intersecretariat working group on energy statistics was held within the framework of the international energy statistics meeting held in November 2005 in Paris at the invitation of the International Energy Agency. A detailed survey of the activities of the organizations that participated in the meeting was carried out by the International Energy Agency. The survey was based on the recommendations of the ad hoc expert working group. The meeting, which was attended by 24 international/regional/ sectoral organizations engaged in the production or use of international energy statistics, reinforced the need for formalizing the cooperation among the major international organizations with a view to harmonization and improved sharing of work among them. The intersecretariat working group on energy statistics will formally be convened in the second quarter of 2006, when the recommendations from the first meeting of the city group and those of the thirty-seventh session of the Commission can be incorporated into the work programme and priorities of the group.

26. The first meeting of the city group will be held from 6 to 8 February 2006 in Oslo, at the invitation of Statistics Norway. The meeting is expected to draw up a work programme with a timetable for joint methodological work. The report of the meeting of the city group will be made available to the Commission as a background document.

IX. Points for discussion

27. **The Commission may wish to provide further guidance to the work of the city group and the intersecretariat working group on energy statistics, taking into account the report of Statistics Norway on energy statistics entitled "Oil statistics: a discussion of quality components" (E/CN.3/2006/11) and the two background documents that contain the report of the ad hoc expert working group and the city group on energy statistics.**

Notes

[1] *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24).

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Report of Statistics Norway on quality components of oil statistics

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its thirty-sixth session,** the Secretary-General has the honour to transmit to the Statistical Commission the report of Statistics Norway on quality components of oil statistics. The focus of the report is national oil statistics as the key to the quality of international oil statistics. It analyses the main quality challenges and makes recommendations for improvement both at the governance and at the technical level.

The Commission may wish to discuss the recommendations and points for discussion contained in paragraphs 81 to 91 of the report.

* E/CN.3/2006/1.

** See *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24), chap. III, para. 7.

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Report of Statistics Norway on quality components of oil statistics

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I. Introduction

1. At its thirty-sixth session the Statistical Commission discussed the report of Statistics Norway on energy statistics (E/CN.3/2005/3). The present report, submitted pursuant to the recommendations made by the Commission, is an attempt to review the major issues which affect the quality of national and international oil statistics. While the focus is on oil, the conclusions and recommendations of the report have a wider relevance to energy statistics in general and are intended to contribute to the work of the newly established City Group and Intersecretariat Working Group on Energy Statistics.

2. The economy in most countries is influenced by what happens in the international oil markets. Shortcomings in national and global oil statistics have contributed to market volatility and have created enormous challenges for economic policymaking in many countries. Elevating oil statistics to the level of official statistics will help improve their quality. Furthermore, moving towards common definitions and conversion factors, while challenging, will also help to improve the quality of the statistics and their interpretation.

II. Scope and coverage of the report

3. The purpose of the present report is to present key characteristics of oil statistics and point out crucial methodological challenges. While applying an international perspective, the focus is on national oil statistics, based on the understanding that global statistics will always depend on the quality of national data. We use the Norwegian system for oil production statistics as a reference for this discussion. The document follows the value chain from remaining primary resources to investment decisions, production, imports/exports, stocks and use, and emphasizes the need for information and statistics through the entire chain.

4. The scale of the oil market indicates that relatively small errors in data and conversion factors will have huge effects and can cause great errors in the statistics. Some of these errors are inevitable, but good production routines, consciousness and knowledge of the market and technical insight will minimize the risk of errors. The intention is to emphasize the importance of high-quality national data and to indicate how such national data can be building blocks in an international system for oil statistics.

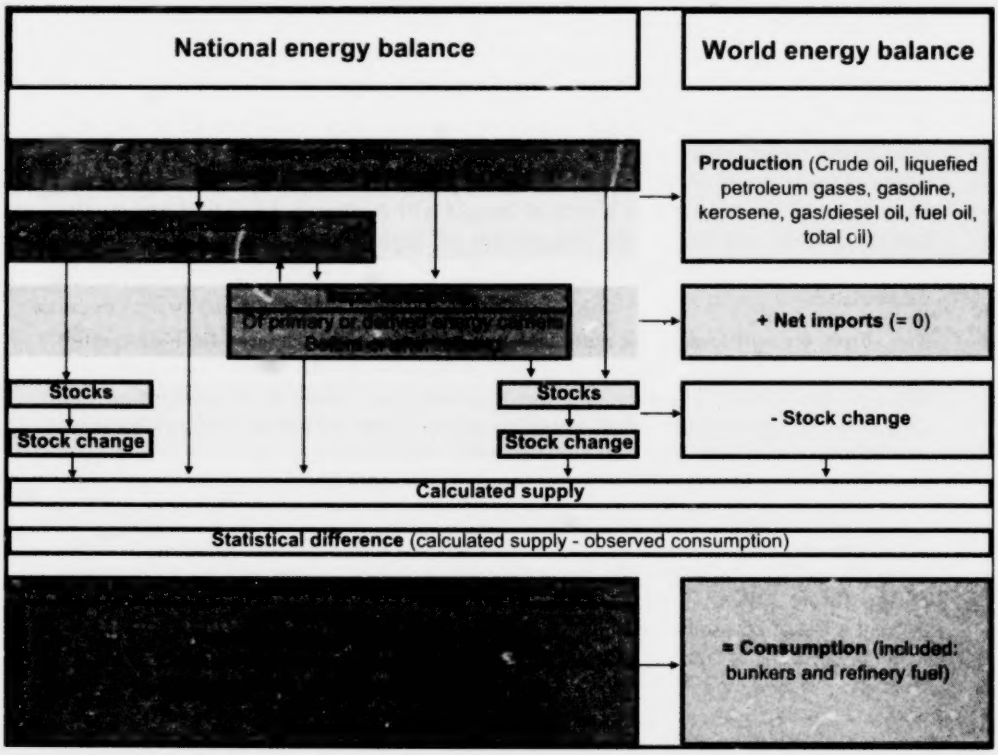
5. First, we will look at the current situation and explain the need for high-quality oil statistics, based on the oil market's influence on the global economy, and describe the current practice and use. Second, there will be a description and discussion of national use of oil statistics, with a focus on national energy balances and national accounts. We will look at some important principles for statistics in general and for oil statistics in particular, and describe the institutional framework in oil-production statistics. Third, we will move on to a more detailed discussion of the production of oil statistics, with a description of definitions, classifications and concrete quality challenges and potential pitfalls. Finally, there will be a discussion of the future potential for national and international oil statistics, and we will present a list of recommendations for further improvements.

III. The need for high-quality oil statistics

6. Oil is the most traded commodity worldwide, and the economy in most countries is influenced by what happens in the international oil markets. Fluctuations in oil prices have significant effects on both global and national economies. For decades it has been observed that unexpected fluctuations and shocks in oil prices have created economic shocks and enormous challenges for economic policy in many countries, all over the world. These problems may have many causes, but it should not be overlooked that the shortcomings in national and global oil statistics have contributed to problems in understanding the causes of imbalances in petroleum markets, choosing the appropriate corrective measure and measuring the effectiveness of various energy policies. If we could improve the statistics for oil, we would have an improved ability to understand oil markets and project oil prices. An improved understanding and forecasting of oil prices will be useful for all policymakers.

7. Users of oil statistics need reliable information on the world's remaining oil and gas resources and their regional distribution. This is important for long-term analyses of the oil market. Information on the level of and changes in investment in oil-producing countries is likewise important for assessing the direction of possible changes in production capacity.

8. To obtain international consistency, it is crucial that every country have internal consistency in national oil statistics. These are the basis for international reporting, which has a close connection with national energy balance and national accounts.


National energy balance
World energy balance
Production (Crude oil, liquefied petroleum gases, gasoline, kerosene, gas/diesel oil, fuel oil, total oil)
+ Net imports (= 0)
Stocks
Stock change
Stocks
Stock change
- Stock change
Calculated supply
Statistical difference (calculated supply - observed consumption)
= Consumption (included: bunkers and refinery fuel)

9. National energy balances are some of the most important sources of data for calculating emissions of greenhouse gases and other air emissions. High-quality energy data are necessary for high-quality emission figures. The emission inventories are reported to the United Nations Framework Convention on Climate Change and United Nations Economic Commission for Europe (ECE) Convention on Long-Range Transboundary Air Pollution. The figures are used by the United Nations to investigate countries' fulfilment of Kyoto Protocol obligations.

10. Furthermore, national oil statistics for oil-producing countries are very important in national accounts. National accounts in all countries are based on international principles and standards. As a consequence, oil production and related activities have to be included in national accounts, whose principles provide guidelines for defining national production, the production boundary and international transactions and relations.

11. International statistical principles focus on comparability between countries. This goes for all statistics, including oil statistics. There are variations between national statistical systems, and the position of oil statistics in the system of official statistics also varies from country to country. This means that there are differences among countries both in the role of the national statistical office in the production of oil statistics and in the extent to which the basic principles for official statistics are followed. The distribution of tasks between reporting units, administrative bodies, political bodies, international corporations and organizations, as well as national statistical offices and international statistical organizations, will vary between countries, and this can be a hindrance to international consistency. An important step on the road to international consistency is the focus on national oil statistics and developing concepts, standards and methods that are broadly accepted by countries internationally.

IV. National use of oil statistics

12. Oil statistics are used directly by external users, both in the energy sector (private and governmental) and in other sectors for monitoring and policy actions. Lack of accuracy and frequent revisions are problems encountered by users.

13. National oil statistics are the foundation for international reporting, and we have already mentioned the connection between the national and the international energy balance (see figure). Data may be collected directly from industries, or from administrative information, collected by several types of governmental bodies. National systems for oil statistics require internal consistency between different divisions of a statistical office. The system for oil statistics further requires consistency between the statistical office and the industrial and organizational bodies that provide data, as well as close cooperation and dialogue between the actors. Good national statistical systems will ensure a consistent national energy balance, with small statistical differences, and create positive synergies for international oil statistics.

14. Consistency among the various oil statistics is also very important for achieving consistent national accounts. In this context, the important components are quarterly investment statistics, import and export figures, the energy balance, structural statistics and the production indices. The direct activities, measured by employment, etc. may be moderate, but for oil-producing countries the revenue is of

great economic importance. Oil statistics are important for economic policy because of the influence oil production has on revenue, and investments are in some periods very dominant and have clear, direct economic effects, both on the level of production and on economic trends. Oil revenue will also have effects on the balance of payments and the monetary situation. A first step in the process of making national accounts is to calculate values and prices on the basis of information from the oil statistics. In this process, volume figures for oil and gas extraction are important for harmonizing and balancing, as well as for consistency checks. National accounts figures are published in current values, as well as in constant prices. The volume figures are subject to much attention when the national accounts are published as key economic indicators for the development of the economy. Volume figures are, further, an important component in the quarterly production index, which is a part of the quarterly national accounts.

15. Oil statistics consist of different data sets, which to some extent use different sources and input. This may create challenging situations with regard to consistency. While oil statistics are made and used by various institutions, the national statistical institute in a country is usually responsible for the national accounts, and there is an obvious need for coordination. The use of different oil statistics in the national accounts is a very important consistency check for national oil statistics, as statistics from various sources are put together in a balanced system. Consequently, there is a mutual dependency between the different users and the producers of oil statistics. However, different uses of oil statistics may require different definitions or products.

V. International use of national oil statistics

16. While national oil statistics are important for oil-producing countries, global oil statistics are important for all countries. Several organizations and institutions compile global oil statistics, but it has been a common concern that international oil statistics suffer from severe quality problems. Main quality problems are linked to:

(a) Timeliness of national figures;

(b) Accuracy and important revisions of national figures;

(c) National differences in definitions and measurement;

(d) The application of different methods for international aggregation.

17. To improve the timeliness of global statistics and the transparency of the oil market, the International Energy Agency (IEA) developed a questionnaire for monthly reporting of oil statistics, to be submitted by the member countries two months after the reference month. The results are used as input to the monthly *Oil Market Report*, issued by IEA, which gives an updated world overview of the oil market situation. It is widely used by the organizations in the market, analysts, policymakers and journalists to survey the oil market.

18. Users of oil statistics demanded that oil data be more transparent and that national figures be combined to form a global information system. As a result of these needs, the six main organizations engaged in international oil statistics embarked on an initiative to assess the monthly oil-reporting capability of their member countries. They designed a monthly oil-data report, known as the Joint Oil

Data Initiative (JODI), and asked member countries to complete it for the last two months. JODI focuses on key figures. The survey covers figures for production, imports, exports, stocks and inland consumption of crude oil, liquefied petroleum gases and some aggregated groups of refined petroleum products.

19. JODI is an attempt to create a global information system for oil production in which being up to date has been given high priority. The JODI database was formally opened on 19 November 2005. Even though JODI is a great success, it should be mentioned that there are some quality problems. In all statistics there is a trade-off between being up to date and accuracy. The JODI reports use preliminary figures extensively, and final figures are in principle not available until one year after the end of the year the data refer to. The data-quality problems sometimes originate in uneven and inadequate reporting by individual countries and national statistical systems. Some countries provide data of rather poor quality, and for some cells no data at all. In some cases, data are of questionable accuracy owing to respondents' lack of experience with oil-market data. The reporting is voluntary, with no means of sanction, and not all participating countries submit data regularly. Therefore, before the database was opened to the general public it underwent a very rigorous quality analysis and the country series were classified into quality classes on the basis of agreed criteria. It should of course be added that JODI is a new system, and errors and weaknesses will hopefully be redressed.

20. Transparency in the global oil market requires, first of all, a high level of participation among countries, particularly large exporters and consumers. Next it requires that the participating countries have national statistics of high quality and that internationally approved, or at least known, methods and definitions be used.

21. The international organizations that receive data will then be in need of knowledge about the reporting countries so as to ensure that the correct conversion factors and measurement units are used. This requires cooperation with the reporting countries and access to documentation reports on production routines and methods used.

22. International organizations also have annual reporting systems that include final figures on oil statistics reported almost a year after the reference year. These reports are therefore more accurate than the monthly reports, and they contain more detailed information on inland consumption. However, many of the quality challenges discussed in the present report are general and principal challenges that will also concern the annual reports.

VI. Statistical principles

23. Main common principles for official statistics are accessibility, independence, high quality based on transparent and well-founded methodology, confidentiality and cost-efficiency (including minimizing response burden). These principles are concretized and broadly accepted in major statistical fields, but for oil statistics the common situation can be unclear.

24. Quality principles are based on the need for statistics to be relevant, accurate, timely and punctual, comparable and coherent, and accessible and clear.

25. International comparability is very important and is a core objective for international statistics. The idea is to achieve a world overview of the oil market. It

is therefore essential that all reporting countries use the agreed definitions, units and conversion factors. This is not simple, as even single countries may operate with different internal definitions and product groups. The principle that statistics should be timely and punctual is also very important for short-term reports such as JODI, which is vulnerable to delays exceeding time limits.

26. A statistical system for oil statistics has to be built on the following elements:

(a) Definition of the relevant institutions, economic players and business units;

(b) Definition of products, commodities, and standards and classifications;

(c) Proper data capture from the units;

(d) Data analysis, estimation and dissemination;

(e) International collection and dissemination of national statistics.

In the following sections we will analyse these elements.

VII. Institutional framework

27. The key to the quality of national oil statistics is the governance of the national statistical system, which means addressing issues such as the role of the national statistical office in the production of energy statistics; "official statistics"; and how the use of statistical standards, concepts and classification can be enforced at the national level. It is important to ensure confidentiality and enforce the submission of requested data by reporting units. These are issues that may be taken care of by the statistical office. Oil statistics can also be produced by other government agencies (energy agencies) or by oil companies (national or private). The legal basis for collecting corporate data on product flows depends on the institutional arrangement. If the national statistical office is responsible, a statistics act can be used to have access to corporate data directly or to have access to administrative data. It is an important statistical principle to reduce the response burden and encourage the reuse of data. Besides the quality aspect, this is one main reason for the extensive use of administrative data and registers.

28. A centralized administration for national oil-production statistics and centralized reporting units gives a good overview of the sector. This is of great advantage, as most data used in international reporting already enter into energy balances, energy accounts and other existing statistics. The existence of centralized bodies provides good potential for contact and cooperation with the industry. In addition, it increases the possibility of quality controls and checks. This is undoubtedly of great importance, and of great significance for the data to be of high quality.

29. Examples of administrative bodies that collect oil data are governmental oil agencies and directorates, ministries, tax authorities, customs authorities and industry organizations. These bodies will presumably possess accessible databases and time series that may be used for official statistics. Such data are often subject to extensive quality checks, and the knowledge and competence of these bodies are arguments in favour of involving them. Meanwhile, we have to discuss whether such an involvement influences the data quality or whether it may create biases.

The reporting units and population

30. The population of economic units in oil statistics would be oil companies, producing fields and refineries, together with consumer groups. Of this population, the reporting units should, according to common principles of national accounts, be the ones active within the national borders. Foreign companies with activity within another country's borders should be obliged to provide data to the host national government.

Production

31. Primary production data can be collected from companies at the enterprise level or at the establishment level, which in the oil industry will be the producing field. Production data may also be collected from administrative data, typically reported via a governmental oil agency. The majority of the primary oil information originates from data provided by the oil industry, such as that on the production of crude oil and natural gas liquids, imports, exports and stocks. The role of the industry is therefore extremely important in any country's system of oil statistics. Secondary production data are also provided by the industry, in particular the refineries.

Imports and exports

32. External trade statistics based on customs declarations, including loads of crude oil and other petroleum products transported by pipeline, ship, etc., cover imports and exports. Exceptions are products that are exported directly. This will not be registered by customs offices. Additionally, the importing and exporting bodies, such as producers or other traders, and the transport sector, such as pipeline operators and tankers, will record such direct exports.

Stocks

33. Stocks are kept at refineries, terminals and oilfields. The statistics act will also give the national statistical office access to such corporate data.

Consumption

34. Consumption units will be:

(a) Refineries (feedstock and fuel);

(b) Energy-converting facilities (power and heating plants, blast furnaces, refineries, etc.);

(c) Consumers by energy sector (mines, power and heating plants, refineries etc.);

(d) Consumers for non-energy purposes (petrochemical industry);

(e) Manufacturing, mining and quarrying;

(f) The transport sector;

(g) Other sectors (fishing, agriculture, households, etc.).

35. The national energy balance will require statistics on inland consumption of petroleum products, distributed by consumer groups. These statistics are often based

on corporate data from companies that sell petroleum products and administrative data on net imports, which are often published separately.

VIII. Norwegian institutional arrangement

36. We have used the Norwegian system for oil production statistics as a reference for the present report. Norway has a centralized arrangement, in which the national statistical office (Statistics Norway) is responsible for energy statistics in general and oil statistics in particular. The mandate of Statistics Norway is broad and also covers energy statistics. Energy statistics are sectoral statistics, similar to industrial, trade or agricultural statistics, which all have their role and are part of official statistics on their own, while also having to feed into the national accounts. The mandate of Statistics Norway is defined by a statistics act, which enables us to have access to all relevant data from providers that we find appropriate, including governmental institutions.

37. The oil business is strictly regulated by the Government, and this role is carried out by the Norwegian Petroleum Directorate (NPD). Major players are, besides NPD, the oil-producing companies, refineries and stock terminals. The system consists mainly of a few large bodies, which makes for a good overview and proximity between the data providers and the statistical office. NPD collects all relevant data from the oil-producing companies, and the data are forwarded to Statistics Norway. There is close cooperation between NPD and Statistics Norway, which is a huge advantage, due to their expertise and knowledge of the market. Data are disseminated and calculations are made before international reporting. The statistical office is not a user of statistics itself, but fulfils its mandate on the basis of the needs of society. However, there are some indirect internal uses of oil statistics in producing the energy balance and the national accounts.

38. The conclusion, based on experience in Norway, is that the role of the statistical office in the production of good-quality energy statistics should be strengthened, either by taking a more active part in the process of collecting and disseminating data, or by ensuring the application of statistical standards by the producers of energy statistics. In this way oil statistics will be elevated to the level of official statistics and will have to respond to the quality requirements of official statistics.

IX. Concepts, standards and classifications

39. When comparing oil-production statistics from various countries and regional and international organizations, it is essential that the same definitions and conversion factors be used. This is generally a problem, as there are several operational definitions, even for core concepts such as crude oil. A common consensus on the list of products to cover is also essential. This is, however, not always obvious.

Product definitions

40. There are different standards for classification of energy products, and different organizations use different definitions. Existing product classifications are:

(a) The Harmonized Commodity Description and Coding System (HS) used for foreign trade statistics worldwide;

(b) The Central Product Classification (CPC), used by the United Nations for production statistics and closely linked to the European Union (EU) classification of products by activity (CPA) and Products of the European Community (PRODCOM) classification;

(c) PRODCOM; from 2005, energy products do not appear to be included.

41. The United Nations Statistics Division has compared these different classifications in a study and has found several problems and differences. The conclusions are that for crude oil and natural gas the PRODCOM classification is much more detailed than CPC, while there is quite good accordance between HS and CPC. For petroleum gases there is less correspondence, and for refined petroleum products there is need for a major revision. The analysis below will use the findings of this study.

42. Some organizations that use their own definitions are the United Nations Statistics Division, the Latin American Energy Organization (OLADE), the Organization of the Petroleum Exporting Countries (OPEC), the Asian Pacific Energy Research Centre (APERC) and IEA. Below we will try to find the commonalties of the different definitions for the products. The definitions used by the various institutions and organizations differ considerably. This is an attempt to interpret them and to extract their essences.

Crude oil

43. A minimum common definition is that crude oil has to be in a liquid state at normal surface temperature and pressure. Furthermore, there seems to be agreement that crude oil must be a mineral oil of natural origin comprising a mixture of hydrocarbons and associated impurities, such as sulphur.

44. A precise chemical definition of crude oil is less attainable, and there may be different groups of crude oil. The differences relate mainly to whether field/lease condensate or some natural gas liquids should be included, and to what extent they should be included. If common agreement is achieved as to whether to include condensate or not, this has to be properly defined.

45. The product classification used in national account and economic statistics — the CPA classification — is not very explicit, and it operates with the following definition: petroleum oils and oils obtained from bituminous minerals and crude, except for natural gas condensates. The CPA classification has a single code for all natural gas condensates.

Natural gas liquids

46. Natural gas liquids are liquid or liquefied hydrocarbons recovered from natural gas in separation facilities or gas processing plants, or extracted from unstabilized crude. There seems to be agreement on including ethane, propane, butane and pentane, while the inclusion of natural gasoline, plant condensate and field condensate is more questionable. A common characteristic of all the components to be included is that they are liquefied.

47. The national account CPA classification includes ethylene, propylene, butylene and butadiene, natural gas, gaseous hydrocarbons, propane and butane.

Liquefied petroleum gases

48. Liquefied petroleum gases have a more restricted definition than natural gases, and there seems to be a common agreement that liquefied petroleum gases comprise propane and butanes.

Joint Oil Data Initiative aggregates

49. JODI is based on a simplified questionnaire. It has a few key product categories, and the categories are aggregated products. There is a focus on being up to date, resulting in less detail.

50. A detailed description of all the refined products is provided by the different organizations. Here we will list only the JODI product aggregates:

(a) Liquefied petroleum gases, comprising propane and butane;

(b) Gasoline, comprising motor and aviation gasoline;

(c) Kerosene, comprising jet and other kerosene;

(d) Gas oil, for automotive and other purposes;

(e) Fuel oil — heavy residual oil and boiler oil, including bunker oil;

(f) Total oil — the categories liquefied petroleum gases to fuel oil, and all other petroleum products (refinery gas, ethane, naphtha, petroleum coke, white spirits and special boiling point solvents, paraffin waxes, bitumen, lubricants and others).

Units of measurement and conversion factors

51. Oil and oil products are measured in different units. Barrels, litres or tons are used mostly, depending on what is convenient. The important thing is to keep control of these different units. In the energy balance it is useful to have all the products measured in the same terms — for example, energy content. For this purpose, conversion factors are used. Conversion factors may vary within defined product definitions due to variations in purity. An example is the case of crude oil and natural gas, where the conversion factors vary according to where in the world the product originates.

Definition of production

52. Most organizations agree on defining production so as to include all production within national boundaries, including offshore production. More precisely, the production of primary energy carriers could be defined to include only marketable production, excluding volumes returned to formation. The production of natural gas should also include saleable quanta. A relevant question is whether it should also include quantities used in the producing field, for energy production, flaring or injection, or sold to another field for injection. Furthermore, it has to be decided whether the production of finished petroleum products at refineries should include refinery losses and refinery fuel.

Definition of imports and exports

53. Import and export figures should reflect the volumes that have crossed the national boundaries, with or without customs clearance. An important question is whether imports should be reported as coming from the country of ultimate origin. This would be interesting for primary products, but in today's market it is impossible. Oil is widely traded, often bought on paper in one country with a declared destination but sold while at sea to another.

Definition of stocks

54. Oil stocks are a critical element of information in an oil balance. The majority of oil stocks are essential ones for keeping the global supply system operating. Oil can be stored in pipelines going from the wellhead production sites to refineries or from refineries to consumers, or it can be held in tankers, railway cars and road tankers linking production sites, refineries and consumers.

55. It is widely agreed that the definition of stocks represents the primary level of stocks at the end of the month within national territories, including stocks held by importers, refiners, stock-holding organizations and Governments. However, some countries maintain stocks in other countries, and these should be accounted for somehow. The important issue is that there be agreement on how to treat these stocks and that the definitions be kept under control. An easy solution would be to base this on the national account definitions, which are already internationally approved.

Definition of stock change

56. The definition of stock changes is also widely agreed upon, measured as closing stocks minus opening stocks. The opening stocks on the first of each month equal the closing stocks of the previous month. A positive number indicates a stock build; a negative number indicates a stock draw.

Definition of international marine bunkers

57. The international marine bunkers concept may cause problems for some countries, especially regarding the national accounts definitions versus the energy balance approach. These differences can be important for countries with major ports serving a large international hinterland or for countries with a large international shipping fleet. Problems also include fuel for fishing vessels working in international waters, military use and supply ships travelling back and forth to offshore installations.

Estimated future investment and remaining resources

58. Estimates of planned future investment and remaining resources are generally quite uncertain. The importance of these concepts favours the making of clear definitions and methods for estimating such figures. Investment figures are naturally based on corporate data, with few means of quality control. Estimates of remaining resources are also made by the operators, but to a larger extent also at the government level. There is no common and clear definition of these concepts today, and the remaining resource concept is quite controversial and a matter of much international attention. However, ECE established an ad hoc group of experts on

harmonization of energy reserves and resource terminology, and as a result the United Nations Framework Classification for Energy and Mineral Resources has been developed and adopted.

Definition of net domestic consumption

59. Net domestic consumption is defined as the observed deliveries of finished petroleum products for inland market consumption, including both traditional consumption by households and intermediate consumption in economic sectors. To cover all consumption, this should also include net imports by wholesale dealers and retailers. This figure may differ from the calculated figure, due, for example, to differences in coverage or in definitions used in different reporting systems.

X. Quality challenges

60. The main problems in national oil statistics are definition and technical problems. An example of a technical problem is the use of reporting units: whether to classify at enterprise level or the establishment level. One producing unit may have several licensees, and a practical method would be to create a balance for each unit. In other cases the practical unit will be at the enterprise level. This mix of units may cause some challenges.

61. An example of a definition problem is product definitions: some apparent statistical differences can be caused by a mixture of product definitions. If a product is counted as crude oil in one statistic and as a natural gas liquid in another, this may cause deviations. Another example is concept definitions: how the value of production is calculated depends on the definition of production. It also depends on the price of the product, which price is used (e.g., market, international) and where in the chain the price is collected.

62. Deviations between different methods can be caused by the definition used or by actual errors. The comparison of methods is likely to uncover these reasons for deviation.

Production figures

63. Final allocated production figures are often not available in time for international needs, which means that preliminary production figures are used extensively. The fact that estimated production figures are used before the final figures are available is a potential source of error. Estimated figures are often arrived at by aggregating the daily production in, say, the first half of the month.

64. The production of natural gas liquid products may be difficult to measure exactly, because they consist of several products produced in one stream. They are later fractioned at refineries, measured and split by product. In cases where a natural gas liquid product is unspecified, the exact product may be identified by measuring density.

65. Production figures may vary slightly during the year due to revisions and updates. In cases where different users collect data from the same source at different times, source data may contain differences, leading to inconsistency between reports that in principle should contain the same data. The logical conclusion would then be to agree that data should be collected once and then made available to all users, or

that the data providers should define data to be final at a certain time and then perform revisions and updates at given times.

66. In the measurement of production the treatment of injection can create inconsistencies. Injection could be included in gross production, and not in net production, while some definitions may require injection to be included in net production. The same holds for flaring and consumption for energy production in the oilfield. National accounts demand statistics that are consistent with their definitions, and, in this example, injection should be included only if there is a sale to another producing field.

Values and prices

67. We can sometimes observe inconsistencies caused by errors in price and value variables. Different prices are used at different stages of the value chain, ending in an export price or a market price. Other prices may be norm prices, set by the Government and based on market prices, among other things, and used in connection with internal sales to prevent underpricing. Agreement on what price to use, or explicit information on what prices are used, is essential to ensure consistency between values and volumes in the balancing of production, consumption, exports and imports.

Imports and exports

68. Foreign trade of products is generally registered (a) by the importing or exporting companies and (b) at customs offices. Some volumes of petroleum exports may be shipped or piped directly from the petroleum fields to other countries. If these volumes do not enter the national customs territory, they will not be registered in the customs data, and the only source will be corporate data. Both sources will generally have only information on the first buyer, which generally is not of the same nationality as the final consumer. The two sources may use different figures because of lack of information about load capacity or the fact that they operate with different destination countries or countries of origin. In some cases there may also be different reporting on the production field of origin. The combination of these problems will require that the two sources be compared, and to prevent the possibility of double counting a consolidated balance to compare each load should be produced. This will, however, demand a great deal of resources, and in practice may be impossible.

69. At sites where different countries cooperate, such as the North Sea, crude oil or other products may cross borders several times on their way to the destination country. When the loads cross borders, this is registered by the customs offices. To prevent double counting, these loads have to be treated specially. One problem may be that there may be some delay in customs declarations. Imports and exports are dated at the time of billing, which may be different from the actual import or export date. This may lead to statistical deviations caused by methodological issues, not by actual conditions.

70. Another source of error relating to customs declarations may be the need for the correct classification of exported products. Tax authorities identify the exported commodity and require unambiguous definitions and explicit marking.

Stock figures

71. Crude oil and natural gas liquids are stored onshore, at refineries or terminals, and offshore, at platforms or installations on the seabed. Possible errors or difficulties may relate to uncertain stock level measurements, or instances when crude oil is temporarily stored at the end of a month. Temporarily stored oil is included in the production figures, but may not be exported or included in stock figures. The stock level at the end of a month depends on the date of the last shipment of crude oil. Stocks at terminals are built up and drained continuously. This means that stock in theory may vary between empty and full capacity from month to month. Over time, the level seems to be random, without trends.

72. Stocks of natural gas are complicated, since storing natural gas requires expensive technology. Natural gas is often cooled and compressed, which involves a very expensive and demanding technology. Natural gas stored in pipelines is another challenge, as it is difficult to measure. Increasing the pressure in pipelines will increase capacity, and can be used as a storage method.

73. In most countries stock data are publicly available. However, in a few countries stock data are still considered confidential and regarded as valuable commercial information upon which competitors may act. To enable us to have aggregated information on stock levels for each product it is crucial that data on oil stock levels be reported for all countries.

Inland consumption

74. Inland consumption is in principle defined as production plus net imports, minus refinery fuel, minus international marine bunkers, plus interproduct transfers, minus stock change. This figure may differ from observed inland consumption.

75. To get accurate figures for observed inland consumption, distributed by consumer group, it is necessary to link sales with the right customer group. This can be achieved by use of the International Standard Industrial Classification/Statistical Classification of Economic Activities within the European Community (ISIC/NACE) system, in which sales companies link their customers to the right ISIC/NACE codes. This requires that the sales companies be in possession of an updated register that has every customer's code. The problem with this method is that the final consumers are not necessarily identified, which is particularly relevant for large suppliers. However, the quantity of each petroleum product should be correct.

76. If there is a lack of primary data and satisfactory methods for calculating inland consumption, the consumption is set to equal calculated consumption. This is obviously a source of errors.

Statistical difference

77. Statistical difference is defined as the difference between calculated domestic consumption and observed consumption. Major statistical differences are a problem, and indicate that inaccurate figures have been used at some point in the process. Trends in statistical difference are more disturbing, indicating structural or methodological errors.

Historical data and revisions

78. Historical data and time series are very important in the analysis of trends and developments in the market, and for policymakers in measuring the effects of their policies. They are also an important source of checks and controls of new data. Wide deviations or sudden changes in direction may be caused by actual errors and need to be investigated.

79. Changes in data caused by historical errors, changes in definitions or new information will influence the historical time series, and revisions have to be effected carefully. International coordination is important when revisions are carried out, especially when carried out due to changes in definitions. This is essential to secure consistency between countries and continuity in time series. A direct parallel is the revision of the national accounts, which is coordinated internationally and carried out within the same time frame for every country. Changes in data caused by actual errors at the data production time may be revised continuously without creating any major problems.

80. A problem with revising historical data due to a change in definitions is that the data production may be based on historical definitions, and consequently it could be difficult to transform old data into new definitions. This problem also creates challenges for comparability and development over time, where a certain development in time series can be caused by improved methods, and not actual circumstances.

XI. Recommendations and points for discussion

Improve national oil statistics

81. **It is strongly recommended to strengthen the role of national statistical offices in the production of good-quality energy statistics by having them take a more active part in the process of collecting and disseminating data and ensure the application of statistical standards by the producers of energy statistics. In this way oil statistics will be elevated to the level of official statistics and will have to respond to the quality requirements of official statistics.**

Consult with stakeholders

82. **Representatives of the oil industry, industry and trade associations, and energy- and environment-related non-governmental organizations should be actively consulted. The involvement of these groups in the preliminary discussions on information needs and their continued partnership are essential for the success of the strategies to be developed.**

Integrate international definitions into national statistics

83. **To secure comparability between countries, which is crucial for a transparent market, it is of great importance to attain a common set of definitions. The international standards that are used should be reviewed, with the objective of international agreement on a single set of definitions adopted by each reporting country.**

84. **A broadly based review team, with members from the various organizations, should be established to analyse the different definitions and suggest a common definition for each product and for some key concepts, such as production and stocks. The team should also come up with a suggestion for common international reporting to prevent double reporting. The work could be seen in connection with revising the United Nations manuals.**

85. **To obtain such agreement may be difficult, but we have to emphasize the advantage, both nationally and internationally, of having one common set of definitions. A compromise will be to agree on an international standard for use in international reporting and applied when completing the questionnaires, while national definitions are used nationally. For this, countries will need to compare their definitions with the international ones and document all differences.**

Revisions

86. **When common international standards are agreed upon, all countries should revise their reports on the basis of these definitions. It is important to establish common international routines for revising data to secure continuity and consistence. These could be based on the routines for revising the national accounts.**

Statistical differences

87. **It would be useful to analyse statistical differences in reporting. It is likely that there is some statistical difference from month to month, particularly for large producers, importers or exporters, but in the long run there should not be a trend in statistical differences. All products and countries should be analysed to discover possible trends. Such analyses could, apart from resulting in methodological improvements, also uncover "lost volumes". Institutions such as IEA and the United Nations, which have access to international data and time series, could be responsible for this.**

Documentation of production routines

88. **Each country should document its national production routines for oil statistics and make the documentation available so that each country's methods and routines can be reviewed and evaluated easily, weaknesses can be revealed and improvements can be suggested. These papers should follow a defined outline with a list of concepts and methods to be covered, for easy comparison between countries.**

Increase the qualification level of statistical staff

89. **The composition of an energy statistics team is important. According to the International Monetary Fund, the core of the data-quality problem is the uneven and inadequate data reporting by individual countries and national statistical systems. In several cases, data are of questionable accuracy owing to lack of experience on the part of the respondents. Adequate data reporting requires the participation of people who understand the technical side and the problems encountered by oil producers and refineries when trying to respond to statistics questionnaires, as well as people who know international statistical**

classifications and standards, questionnaire design, sample selection, etc. This applies to both national and international teams. Joint manuals, handbooks, regular meetings between reporting countries and the organizations, and training courses for statisticians are good means to increase statistical skills, ensure understanding and coordinate the methodology and definitions to be used.

Introduce new concepts in national reporting

90. **To give the oil market information on the likely future development of production in the medium and the long run, information on investment in oil and gas exploration and production and remaining resources is needed. Well-established concepts will contribute to the predictability of the market, but depend to a large extent on data that are subject to few means of quality control. The possibility of establishing an internationally approved and objective method for these estimates should be discussed.**

Continue international cooperation to refine global data systems and improve quality and timeliness

91. **As mentioned above, there is a trade-off between being up to date and accuracy, and there are some countries that provide data of rather poor quality. The biggest producers and exporters provide data of good quality, but work needs to be done to increase participation by countries and to enhance the quality of less reliable data. Refinement of the system is needed, and it is especially important to find ways of further improving the timeliness of data while reducing the use of preliminary and estimated figures.**

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Social statistics

Report of the Secretary-General

Summary

The present report was prepared at the request of the Statistical Commission at its thirty-sixth session. It summarizes the findings of *The World's Women 2005: Progress in Statistics*, which reviews and analyses the capacity of countries to report gender statistics to the international statistical system. The report also assesses progress made in the provision of gender statistics in the past 30 years. Stark disparities are identified in national statistical capacity to report such statistics. The report proposes actions and strategies for improving gender statistics worldwide. Points for discussion by the Commission are contained in paragraph 14.

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I. Introduction

1. The present report prepared at the request of the Statistical Commission at its thirty-sixth session,[1] reviews and analyses the current availability of data and assesses progress made in the provision of gender statistics in the past 30 years. It highlights, among other things, the importance of building and sustaining national statistical capacity to improve gender statistics. The report draws from the recent publication, *The World's Women: Progress in Statistics*, produced by the Statistics Division, Department of Economic and Social Affairs.

2. The focus is on the reporting of statistics on women and men by countries to the international statistical system. The main sources of data used to analyse countries' ability to produce and report information on gender included the Statistics Division of the Secretariat; the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics; the International Labour Office; and the World Health Organization with inputs from the United Nations regional commissions.

II. Need for gender statistics

3. The Commission on the Status of Women, in its 10-year review of the Beijing Platform for Action, noted that the activities for the advancement of women had been limited partly by the lack of gender statistics and data disaggregated by sex and age and, in many areas, inadequate methods for assessing progress.[2] The timely availability of reliable statistics on the situation of women and men is critical for Governments to successfully measure progress or lack thereof in the quest for equalization of opportunities between women and men, girls and boys.

4. In 1995, the Fourth World Conference on Women called in its Beijing Declaration for a more comprehensive approach that incorporated a gender perspective into national statistical systems to ensure that gender statistics adequately demonstrated the particular and often different experiences of women and men in society.[3]

5. It is against this background that *The World's Women 2005* analyses the extent to which the growing demand for gender statistics is being met by Governments. This is done by assessing national statistical capacity to report gender statistics to the international statistical system. It looks at the extent to which official national statistics, as differentiated from internationally prepared estimates, are available in various areas of concern. By focusing on the national reporting of gender statistics, *The World's Women 2005* provides stakeholders with information to assess progress, identify gaps and design strategies to improve the collection, analysis and dissemination of statistics needed at the national level for monitoring national development and internationally agreed goals pertaining to gender concerns.

III. National capacity to report statistics

6. In general, the analysis shows a sharp disparity in reporting between geographic regions and across development groups that are reflective of the differences in overall national statistical capacity. A contrast is apparent with, at the

one end, countries that have a strong capacity to collect, analyse and report the requisite statistics disaggregated by sex and age, and at the other, those whose statistical capacity is limited, and who therefore do not collect and report timely gender statistics at regular intervals. A number of countries are in between these extremes, with moderate statistical capacity.

7. The overall reporting of gender statistics on various topics is strongest in Europe, followed by North and South America. Moderate levels of reporting are evident in Oceania and for some topics in Asia. Africa shows the weakest capacity to report the requisite information. The contrasts in reporting, however, are greatest among development groups. The least developed countries[4] are the most lacking in statistical capacity and the ability to report gender statistics in all areas reviewed by *The World's Women 2005*.

8. For example, the report shows that virtually all countries in the developed regions conducted a population census between 1995 and 2004 and reported vital statistics on births and deaths from a civil registration system with 90 per cent or better coverage. Most countries in the less developed regions, excluding the least developed countries, also conducted a census during the same period. However, only about half reported vital statistics from civil registration systems with 90 per cent or better coverage. Among the least developed countries, only 34 out of 50 conducted a population census, and just 2 reported vital statistics from a sound civil registration system.

IV. Status of reporting of specific gender statistics

9. The areas covered include population, households and families; health; education; work; violence against women; and poverty, power and decision-making and human rights. A total of 204 countries and areas are included in the review. The tables in the annex to the present report give the number of countries or areas in each geographic region and development group that reported statistics between 1995 and 2003.

(a) *Population, households and families*. Compared to the number of countries reporting total population, a smaller number reported the information by sex and sex and age. Of the 154 countries or areas in the more developed regions and the less developed regions, excluding the least developed countries, 134 reported statistics on population by sex and age at least once during the period 1995-2003. Among the least developed countries, 17 out of 50 countries reported such statistics. Africa was the region with the lowest number of countries, 23 out of 55, reporting statistics on population by sex and age at least once during this period. The report also analyses the national reporting of births, marriages, divorces and households. While international migration is not included in the analysis, it is recognized that migration is increasing in importance and needs to be considered in future reporting and analyses;

(b) *Health*. The health status of a population is, ironically, often reflected and measured by information about deaths. The analysis shows that during the period 1995-2003 basic statistics such as the number of deaths of women and men and girls and boys were not reported for many countries and areas. Of 204 countries and areas about 121 and 109, respectively, reported the number of deaths by sex and age and number of deaths by cause, sex and age at least once between 1995 and

2003. While total infant deaths were reported by 143 countries or areas, only 114 reported infant deaths by sex. Almost all countries in the more developed regions reported the number of deaths by cause, sex and age at least once during the period under consideration. In contrast, 3 out of 50 least developed countries reported such statistics on deaths and 5 out of 55 countries in Africa reported such information. The reporting of emerging health concerns such as HIV/AIDS as a cause of death improved during the period 1995-2000. About 68 countries or areas reported deaths due to AIDS by sex and age in 2000 compared with 38 in 1995. With respect to disability statistics, at least 80 countries collected disability data in the 1990s and more than 70 countries included a question on disability during the 2000 round of population censuses. Since then, initiatives have been mounted to develop and collect internationally comparable disability statistics through censuses and surveys;

(c) *Education*. Since 1995 most countries have been able to report the number of students enrolled in primary and secondary school, but less than a quarter have reported school attendance. Of 204 countries and areas, 138 and 101, respectively, reported, at least once, the number of girls and boys, by age, enrolled in primary and secondary school between 1998 and 2001, while only about 40 countries or areas reported school attendance by sex and age. Analysis by region revealed that most of the countries in each region were able to provide enrolment data by sex for primary and secondary education. There were, however, important differences in the reporting of census data on school attendance by sex and age among geographic regions and across development groups. A greater number of countries in Europe and Asia reported school attendance by sex and age, while this was not the case in Oceania and Africa. In the case of development groups, greater reporting of census data on school attendance was apparent among countries in more developed regions and the lowest among the least developed countries;

(d) *Work*. Worldwide availability of statistics on economic activity, employment and unemployment is still not very satisfactory. About 125 of 204 countries or areas provided data on the economically active population by sex and 123 of those further disaggregated the data by age. The ability to report varied greatly according to geographic regions, with Africa the least able to report any data related to work. More than half of the countries in Europe, Asia, North America and South America reported data by sex on the economically active, employed and unemployed population at least once between 1995 and 2004. When, however, more detailed breakdowns of data were requested, the number of countries reporting such data dropped. This is the case for wage employment by sex and major industry group, the specific data needed for calculating the millennium development goal indicator, "share of women in wage employment in the non-agricultural sector". Only 74 of the 204 countries provided such data at least once in the past nine years. Time-use studies helped to better capture data on women's paid and unpaid work. Since 1995, at least 67 countries carried out time-use surveys. This includes 33 countries in the less developed regions;

(e) *Violence against women*. There is a general lack of reliable data on the various forms of violence against women. It should be noted, however, that since 1995 there has been some progress in the development of methodology and procedures for data collection on violence against women, in particular intimate partner violence. Since then, initiatives have been mounted to develop and collect internationally comparable statistics on violence against women through surveys. At least 68 countries have conducted such surveys;

(f) *Poverty, power and decision-making and human rights.* In many countries, mainstream statistical agencies and programmes do not routinely collect, compile and disseminate gender statistics under such topics as poverty, power and decision-making and human rights. Regular and sustained collection and reporting of data in the above-mentioned areas has been constrained by a lack of statistical capacity and poorly developed concepts and methodologies, which have contributed to the limited use of existing data to examine gender-based differences in these areas.

10. A review of three periods, 1975-1984, 1985-1994 and 1995-2003, indicates that progress in reporting of official national statistics was minimal. The assessment of progress for the most recent period was partly inconclusive owing to delays in national reporting of the requisite statistics. Considering the number of countries or areas that reported sex and age disaggregated statistics for at least one year and for at least five years in each of the above-mentioned time periods, results showed that fewer countries were able to report frequently (for at least 5 out of the 10 years) their annual data by sex and age. However, frequent reporting of annual data on the economically active population by sex and age improved over the three time periods. *The World's Women 2005* also notes that more countries now have data on violence against women, the participation of women and men in the informal sector and time use for women and men. Notwithstanding some improvements in data collection in these areas, the studies are mainly ad hoc and not mainstreamed into the regular national statistical work programmes.

V. Factors contributing to the paucity of gender statistics

11. The general lack of data to address gender issues and the differences in availability of such data across regions and across topics is partly a reflection of the following three factors:

(a) Inadequate statistical capacity;

(b) Lack of gender mainstreaming in national statistical systems;

(c) Inadequate concepts and methods used in collecting and, to some extent, analysing gender statistics.

VI. Actions and strategies to improve gender statistics

12. ***The World's Women 2005*** **identifies three key actions necessary for improving gender statistics and proposes strategies for implementing each action. The actions are: strengthening national statistical capacity, gender mainstreaming in national statistical systems and development of appropriate concepts and methods for collecting and analysing gender statistics:**

(a) To strengthen national statistical capacity the following strategies should be adopted or implemented:

(i) *Ensuring sustained commitment at the highest levels of government to strengthen statistical systems.* Governments should ensure that statistics be given due priority. For example, in order to have a coordinated approach to the production of a core set of socio-economic statistics required for

policy formulation and planning, Governments should strive, to the extent possible, to support the implementation of at least one population and housing census every 10 years; to establish and maintain a civil registration and vital statistics system; and to ensure the sustainability of an integrated national sample survey programme;

(ii) *Building capacity in data presentation*. Producers of gender statistics need to be more proactive in making the value of gender statistics visible to Governments, the general public and other stakeholders by using more user-friendly ways of presenting and disseminating data in different formats. This could help maximize the use of data and in the process create a demand for statistics that would strengthen the claim of statistical offices on the national budget;

(iii) *Developing human resources in national statistical systems*. Women and men should be given the same opportunities for training and career development within the national statistical system;

(b) Mainstreaming a gender perspective into the national statistical system should encompass all aspects of the production of statistics, from the development of concepts, methods of data collection, analysis and dissemination of results. The following, are among the strategies that could contribute to attaining the above-mentioned goal:

(i) *Supporting gender statistics units*. National statistical offices could benefit from the establishment and retention of gender statistics units. The units could play a catalytic role in initiating and monitoring the process of gender mainstreaming in the national statistical systems;

(ii) *Fostering dialogue between producers and users of gender statistics*. The dialogue between the national statistical office and women's groups could, for instance, increase the capacity of statisticians to identify and understand gender issues and to present data in formats that better address users' needs. User involvement could be beneficial to national statistical offices in gathering support for collecting statistics in new areas. The dialogue could also contribute to the building and sustenance of stakeholders' interest in the production and dissemination of statistics and the development of a national statistical capacity. It could also enable women's groups and gender advocates to understand, gain access to and use gender statistics more effectively;

(iii) *Using administrative data sources*. These sources are in most cases underutilized. However, with the introduction of appropriate changes in the methods of data collection and analysis, the resulting statistics could be used in gender analysis;

(c) Developing and improving concepts and methods in gender statistics is essential for the improvement of gender statistics both in quality and quantity. International and regional organizations and specialized agencies, national statistical offices and other research institutions need to work together to develop and revise concepts, definitions and methodologies for use in data collection in areas where such standards and methods are lacking.

13. **To improve the lives of both women and men, in the long run, statistical systems and budgets at the national as well as international level must bring about the sustained and institutionalized change needed to ensure the availability of quality gender statistics.**

VII. Points for discussion

14. **The Commission may wish to consider the issues outlined in the present report together with information contained in the annex tables. In addition, the Commission may wish to discuss and comment on the national actions and strategies proposed in paragraphs 12 and 13, aimed at improving the availability of gender statistics worldwide.**

Notes

[1] *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24), chap. I, sect. B.

[2] *Official Records of the Economic and Social Council, 2005, Supplement No. 7* and corrigendum (E/2005/27 and Corr.1), chap I, sect. D, resolution 49/4, operative paragraph 5.

[3] See *Report of the Fourth World Conference on Women, Beijing, 4-15 September 1995* (United Nations publication, Sales No. E.96.IV.13), chap. I, resolution 1, annex II, paras. 206-209.

[4] Countries included in the "least developed countries" category are those established by the Economic and Social Council. They numbered 50 in December 2005. See http://www.un.org/special-rep/ohrlls/ldc/list.htm.

Annex

Statistical tables

Table 1.A
Number of countries or areas that reported data on selected demographic characteristics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[a]	*Least developed countries*
All countries or areas	204	55	27	13	50	42	17	47	107	50
Population										
Total, at least once	189	43	27	13	47	42	17	47	103	39
By sex, at least once	179	35	27	13	47	41	16	46	100	33
By sex and age, at least once	151	23	26	11	43	39	9	44	90	17
By sex and age, for at least five years	83	8	12	6	21	32	4	37	41	5
Births										
Total, at least once	153	22	25	11	39	42	14	47	91	15
From civil registration system[b]	111	9	19	6	26	42	9	47	62	2
Total, for at least five years	124	13	22	10	32	39	8	44	76	4
By sex, at least once	120	14	21	9	30	40	6	45	69	6
By age of mother, at least once	113	8	22	10	27	38	8	43	68	2
Marriages										
Total, at least once	134	12	25	10	36	42	9	47	81	6
Total, for at least five years	107	7	20	8	28	39	5	44	63	0
First marriages by age of bride and groom, at least once	85	5	12	6	21	38	3	42	43	0
By previous marital status, at least once	84	4	15	6	19	36	4	40	44	0
Divorces										
Total, at least once	119	11	25	7	32	39	5	44	71	4
Total, for at least five years	94	5	18	6	25	36	4	40	54	0
By number of dependent children, at least once	64	3	8	2	17	32	2	36	28	0
By length of marriage, at least once	78	4	12	6	20	33	3	37	41	0
Households										
Total, for at least one year	59	5	5	3	22	23	1	27	27	5
By sex and age of head, at least once	42	3	5	1	11	21	1	25	15	2
By sex and age of head and size of household, at least once	39	1	5	1	10	21	1	25	14	0

Source: Prepared by the Statistics Division, Department of Economic and Social Affairs, based on data from the United Nations *Demographic Yearbook* system (November 2004).

[a] Excluding the least developed countries.

[b] Reported births at least once from a civil registration system with 90 per cent or better coverage of births.

Table 1.B

Percentage of the world and regional populations in countries or areas that reported data on selected demographic characteristics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[a]	*Least developed countries*
All countries or areas	100	100	100	100	100	100	100	100	100	100
Population										
Total, at least once	98	87	100	100	99	100	100	100	99	85
By sex, at least once	97	80	100	100	99	100	100	100	99	79
By sex and age, at least once	90	59	100	98	93	99	79	99	95	38
By sex and age, for at least five years	66	18	73	68	74	76	75	85	69	16
Births										
Total, at least once	68	43	97	98	60	100	98	100	63	41
From civil registration system[b]	30	18	74	23	13	100	79	100	15	0.1
Total, for at least five years	60	26	95	96	52	99	77	99	58	3
By sex, at least once	40	28	96	88	19	99	76	99	29	6
By age of mother, at least once	39	20	97	96	18	98	76	99	28	0
Marriages										
Total, at least once	64	31	97	86	58	100	80	100	59	30
Total, for at least five years	35	14	95	76	15	99	75	99	23	0
First marriages by age of bride and groom, at least once	27	15	34	59	11	100	75	76	18	0
By previous marital status, at least once	24	15	15	66	11	78	75	63	16	0
Divorces										
Total, at least once	59	27	97	66	51	100	76	100	55	11
Total, for at least five years	27	9	36	61	12	98	75	75	18	0
By number of dependent children, at least once	22	14	29	53	9	84	74	66	14	0
By length of marriage, at least once	23	15	32	66	9	71	75	59	16	0
Households										
Total, for at least one year	43	12	85	51	46	34	12	58	45	7
By sex and age of head, at least once	20	6	85	49	10	31	12	56	12	6
By sex and age of head and size of household, at least once	19	0	85	49	9	31	12	56	12	0

Source: Prepared by the Statistics Division, Department of Economic and Social Affairs, based on data from the United Nations *Demographic Yearbook* system (November 2004).

[a] Excluding the least developed countries.

[b] Reported births at least once from a civil registration system with 90 per cent or better coverage of births.

Table 2.A
Number of countries or areas that reported selected mortality statistics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[a]	*Least developed countries*
All countries or areas	204	55	27	13	50	42	17	47	107	50
Deaths										
Total, at least once	155	22	25	13	40	42	13	47	94	14
By sex, at least once	134	18	22	12	33	42	7	47	78	9
By sex and age, at least once	121	15	21	11	28	40	6	45	71	5
By sex and age, for at least five years	88	4	15	8	20	36	5	41	46	1
Infant deaths										
Total, at least once	143	19	24	11	35	41	13	46	85	12
By sex, at least once	114	12	20	9	28	39	6	44	63	7
By sex, for at least five years	81	5	13	6	22	31	4	36	44	1
Deaths by cause										
Total, at least once	110	5	22	10	27	39	7	44	63	3
By sex, at least once	110	5	22	10	27	39	7	44	63	3
By sex and age, at least once	109	5	22	10	26	39	7	44	62	3
By sex and age, for at least five years	87	3	16	9	18	37	4	42	44	1

Sources: Prepared by the Statistics Division, Department of Economic and Social Affairs: for deaths and infant deaths, based on data from the United Nations *Demographic Yearbook* system (November 2004); for deaths by cause, based on data from the World Health Organization, *WHO Mortality Database* (December 2004).

[a] Excluding the least developed countries.

Table 2.B

Percentage of the world and regional populations in countries or areas that reported selected mortality statistics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[a]	*Least developed countries*
All countries or areas	100	100	100	100	100	100	100	100	100	100
Deaths										
Total, at least once	69	46	97	100	61	100	98	100	64	47
By sex, at least once	63	35	96	98	55	100	76	100	61	15
By sex and age, at least once	61	33	96	98	52	100	76	100	58	13
By sex and age, for at least five years	33	12	94	88	10	98	75	99	19	0
Infant deaths										
Total, at least once	46	40	97	98	25	100	98	100	32	41
By sex, at least once	40	35	96	88	17	99	76	99	27	18
By sex, for at least five years	28	16	94	78	10	60	75	76	18	0
Deaths by cause										
Total, at least once	59	16	98	97	51	100	78	100	56	1
By sex, at least once	59	16	98	97	51	100	78	100	56	1
By sex and age, at least once	59	16	98	97	51	100	78	100	56	1
By sex and age, for at least five years	53	10	96	97	43	98	77	99	49	0

Sources: Prepared by the Statistics Division, Department of Economic and Social Affairs: for deaths and infant deaths, based on data from the United Nations *Demographic Yearbook* system (November 2004); for deaths by cause, based on data from the World Health Organization, *WHO Mortality Database* (December 2004).

[a] Excluding the least developed countries.

Table 3.A
Number of countries or areas that reported selected education statistics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[a]	*Least developed countries*
All countries or areas	204	55	27	13	50	42	17	47	107	50
Access to educational services										
Enrolment in primary education[b]										
Total, at least once	189	53	25	13	47	40	11	45	96	48
By sex, at least once	187	52	25	13	46	40	11	45	95	47
By sex and age, at least once[c]	138	39	16	10	33	34	6	39	65	34
By sex, for at least three years	155	41	17	10	41	39	7	44	76	35
Enrolment in secondary education[b]										
Total, at least once	185	50	24	13	47	40	11	45	94	46
By sex, at least once	182	50	24	13	45	40	10	45	92	45
By sex and age, at least once[c]	101	18	13	8	27	30	5	32	49	20
By sex, for at least three years	143	35	15	11	38	38	6	43	69	31
Vocational, by sex, for at least three years	104	20	9	6	30	35	4	38	47	19
Enrolment in tertiary education[b]										
Total, at least once	166	48	16	12	42	39	9	44	82	40
By sex, at least once	154	45	14	9	40	39	7	44	73	37
By sex, for at least three years	104	20	10	5	30	35	4	40	47	17
By sex and field of study, for at least three years	62	12	3	1	15	29	2	33	19	10
School attendance										
Total	44	4	7	4	11	17	1	19	21	4
By sex	41	4	4	4	11	17	1	19	18	4
By sex and age	40	3	4	4	11	17	1	19	18	3
Outcomes of educational experience										
Literacy										
Total	82	15	8	7	30	16	6	16	53	13
By sex	81	15	8	7	30	16	5	16	53	12
By sex and age	77	14	7	7	29	16	4	16	49	12
Educational attainment										
Total	80	12	10	3	25	25	5	29	42	9
By sex	77	12	8	3	25	25	4	29	39	9
By sex and age	71	9	6	3	24	25	4	29	34	8

Sources: Prepared by the Statistics Division, Department of Economic and Social Affairs, based on enrolment data (November 2004) and literacy data (April 2005) provided by the UNESCO Institute for Statistics excluding Institute estimates; and on data from the United Nations *Demographic Yearbook* system (November 2004).

[a] Excluding the least developed countries.

[b] Reported data for the academic years 1995/96 to 2001/02 (excluding the academic year 1997/98).

[c] Reported data at least once for the academic years 1998/99 to 2001/02.

Table 3.B

Percentage of the world and regional populations in countries or areas that reported selected education statistics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[a]	*Least developed countries*
All countries or areas	100	100	100	100	100	100	100	100	100	100
Access to educational services										
Enrolment in primary education[b]										
Total, at least once	99	99	99	100	99	99	94	100	99	99
By sex, at least once	99	99	99	100	99	99	94	100	99	99
By sex and age, at least once[c]	61	61	97	77	53	71	93	82	52	78
By sex, for at least three years	92	66	94	98	96	99	93	100	92	83
Enrolment in secondary education[b]										
Total, at least once	96	78	98	100	99	99	94	100	96	91
By sex, at least once	96	78	98	100	98	99	94	100	96	91
By sex and age, at least once[c]	30	28	66	85	13	66	31	64	16	58
By sex, for at least three years	85	59	94	100	90	79	93	87	86	77
Vocational, by sex, for at least three years	48	32	29	28	49	78	92	60	44	53
Enrolment in tertiary education[b]										
Total, at least once	93	78	97	100	94	99	94	100	92	86
By sex, at least once	69	71	94	87	58	99	93	100	59	78
By sex, for at least three years	59	36	90	69	55	79	92	87	52	51
By sex and field of study, for at least three years	37	22	27	12	39	60	74	52	32	42
School attendance										
Total	14	4	86	22	4	25	0	42	8	5
By sex	14	4	85	22	4	25	0	42	7	5
By sex and age	14	2	85	22	4	25	0	42	7	3
Outcomes of educational experience										
Literacy										
Total	65	34	27	78	80	40	22	24	83	22
By sex	65	34	27	78	80	40	21	24	83	22
By sex and age	64	32	26	78	80	40	21	24	82	22
Educational attainment										
Total	51	31	91	9	54	53	75	61	54	19
By sex	50	31	70	9	54	53	75	61	51	19
By sex and age	48	23	69	9	53	53	75	61	49	17

Sources: Prepared by the Statistics Division, Department of Economic and Social Affairs, based on enrolment data (November 2004) and literacy data (April 2005) provided by the UNESCO Institute for Statistics excluding Institute estimates; and on data from the United Nations *Demographic Yearbook* system (November 2004).

[a] Excluding the least developed countries.

[b] Reported data for the academic years 1995/96 to 2001/02 (excluding the academic year 1997/98).

[c] Reported data at least once for the academic years 1998/99 to 2001/02.

Table 4.A

Number of countries or areas that reported data[a] on selected economic characteristics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[b]	*Least developed countries*
All countries or areas	**204**	**55**	**27**	**13**	**50**	**42**	**17**	**47**	**107**	**50**
Economically active population										
Total, at least once	127	19	17	11	34	38	8	43	70	14
By sex, at least once	125	18	17	11	34	37	8	42	70	13
By sex and age, at least once	123	18	17	11	34	37	6	42	69	12
By sex and age, for at least five years	59	1	10	6	12	28	2	33	26	0
Unemployed population										
Total, at least once	115	13	19	12	31	35	5	40	66	9
By sex, at least once	114	12	19	12	31	35	5	40	65	9
By sex and age, at least once	96	8	15	9	27	34	3	39	51	6
By sex and age, for at least five years	72	2	14	9	14	31	2	36	36	0
Employed population by occupation										
Total, at least once	108	10	16	10	32	33	7	38	60	10
By sex, at least once	105	9	15	10	32	33	6	38	58	9
By sex, for at least five years	68	1	13	8	15	29	2	34	34	0
Employed population by status in employment										
Total, at least once	106	15	16	9	28	33	5	38	59	9
By sex, at least once	104	13	16	9	28	33	5	38	57	9
By sex, for at least five years	64	1	12	6	14	29	2	34	30	0

Sources: Prepared by the Statistics Division, Department of Economic and Social Affairs, based on data from the International Labour Office LABORSTA database (March 2005) and data from the United Nations *Demographic Yearbook* system (November 2004).

[a] From labour force surveys, household surveys, population censuses or labour-related establishment surveys.

[b] Excluding the least developed countries.

Table 4.B

Percentage of the world and regional populations in countries or areas that reported data[a] on selected economic characteristics, 1995-2003

	Geographic region							*Development group*		
	World	*Africa*	*North America*	*South America*	*Asia*	*Europe*	*Oceania*	*More developed regions*	*Less developed regions*[b]	*Least developed countries*
All countries or areas	100	100	100	100	100	100	100	100	100	100
Economically active population										
Total, at least once	50	47	94	98	31	99	96	100	36	50
By sex, at least once	50	47	94	98	31	98	96	99	36	50
By sex and age, at least once	50	47	94	98	31	98	95	99	36	50
By sex and age, for at least five years	32	4	90	78	15	85	74	91	20	0
Unemployed population										
Total, at least once	66	33	93	100	60	98	92	99	61	36
By sex, at least once	66	32	93	100	60	98	92	99	61	36
By sex and age, at least once	45	22	91	91	30	97	75	98	33	27
By sex and age, for at least five years	36	12	91	91	16	96	74	97	24	0
Employed population by occupation										
Total, at least once	42	24	91	98	25	88	92	93	29	36
By sex, at least once	42	23	90	98	25	88	75	93	29	35
By sex, for at least five years	34	8	89	95	16	87	74	92	23	0
Employed population by status in employment										
Total, at least once	46	32	93	91	29	88	76	93	34	38
By sex, at least once	45	27	93	91	29	88	76	93	34	33
By sex, for at least five years	30	8	89	40	16	85	74	91	18	0

Sources: Prepared by the Statistics Division, Department of Economic and Social Affairs, based on data from the International Labour Office LABORSTA database (March 2005) and data from the United Nations *Demographic Yearbook* system (November 2004).

[a] From labour force surveys, household surveys, population censuses or labour-related establishment surveys.

[b] Excluding the least developed countries.

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Items for discussion and decision: principles governing international statistical activities

Principles governing international statistical activities

Report of the Secretary-General

Summary

The present report is submitted to the Statistical Commission in accordance with a request of the Commission at its thirty-sixth session.[1] The report presents to the Commission a set of principles and related good practices for international organizations and describes the process that led to the endorsement of these principles by the chief statisticians of international organizations in the Committee for the Coordination of Statistical Activities. The Commission is invited to review and endorse the principles and to discuss possible steps towards their implementation.

[1] See *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24), chap. VI, sect. G, para. 37 (a).

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1. The global statistical system consists both of national statistical agencies and of international organizations active in the field of statistics. While the Fundamental Principles of Official Statistics, adopted by the Statistical Commission at its special session held from 11 to 15 April 1994,[1] had been designed as a framework for guiding professional statistical work at the national level, no such framework was immediately available to guide the statistical activities of international statistical organizations.

2. Recognizing the importance of having such a set of principles, the Committee for the Coordination of Statistical Activities agreed at its second meeting (Geneva, 8-10 September 2003) that it would be useful to explicitly formulate common principles for conducting statistical activities in international organizations.[2] The ultimate objective was to provide a basis for improved relations between countries and international organizations as well as among international organizations in order to better serve the users of international statistics.

3. The Committee agreed specifically that important issues to be covered in the principles included the use of transparent, professional and scientific methods; the public's right to information about mandates of international organizations; the involvement of national statistical agencies in the development of international standards; the confidentiality of individual data records; and the promotion of the correct use and interpretation of statistics. It mandated a drafting group[3] to develop proposals for a set of principles and good practices, and to use the Fundamental Principles of Official Statistics as a reference framework.

4. At its sixth session (Rome, 12-14 September 2005) the Committee endorsed the set of principles and practices contained in the annex to this report.[4] The Committee recognized that the mandate and governance of individual international organizations might be such that all of these principles and practices would not necessarily be applicable under current circumstances, even though they could be used for future improvements. The members of the Committee in their professional capacity appreciated, however, the value of implementing these principles and practices within their organizations, to the extent possible.

5. In recognition of the potential of these principles to improve the quality of international statistics, and in line with the United Nations Statistics Division's mandate to initiate and promote a coordinated system of international statistical programmes and activities, the Director of the Statistics Division, in a letter dated 25 October 2005 to the chief statisticians (or equivalent) of international organizations, expressed his professional commitment to applying these principles and practices in the work of the Statistics Division. He also invited the partner organizations to express their commitment. As of 9 December 2005, the following 22 organizations had responded positively:

- Asian Development Bank
- African Development Bank Group
- Economic and Social Commission for Asia and the Pacific (ESCAP)
- Economic and Social Commission for Western Asia and the Pacific (ESCWA)
- Economic Commission for Africa (ECA)
- Economic Commission for Europe (ECE)
- Economic Commission for Latin America and the Caribbean (ECLAC)

- Statistical Office of the European Communities (Eurostat)
- European Central Bank (ECB)
- Food and Agriculture Organization of the United Nations (FAO)
- International Atomic Energy Agency (IAEA)
- International Labour Office
- International Statistical Institute (ISI)
- International Telecommunication Union (ITU)
- Organization for Economic Cooperation and Development (OECD)
- United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS)
- United Nations Conference on Trade and Development (UNCTAD)
- United Nations Environment Programme (UNEP)
- United Nations Office on Drugs and Crime (UNODC)
- World Health Organization (WHO)
- World Tourism Organization
- World Trade Organization

See also http://unstats.un.org/unsd/methods/statorg/Principles_stat_activities/endorse.htm.

6. All international organizations, whether members of the Committee or not, are encouraged to review their current practices in relation to these principles and practices within their legal, institutional and organizational frameworks. The Statistics Division will continue its efforts to promote the adoption of the principles and related practices. In particular, the international organizations are encouraged to lodge on their websites a statement setting out the practices they follow in their particular organizations for the information of other members, and for the international statistical community more generally. The Committee is expected to discuss implementation issues in due course.

7. The Commission is invited to review and endorse the principles governing international statistical activities and to discuss possible steps towards their implementation.

Notes

[1] See *Official Records of the Economic and Social Council, 1994, Supplement No. 9* (E/1994/29), chap. V, para. 59.

[2] See document E/CN.3/2004/29, part two, para. 15.

[3] The members of the drafting group included representatives from the World Bank, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Economic Commission for Europe (ECE), the Organization for Economic Cooperation and Development (OECD), the United Nations Development Programme (UNDP), the World Tourism Organization, the World Trade Organization, the International Labour Organization (ILO) and the United Nations Statistics Division (Chair).

[4] See document E/CN.3/2006/30, para. 3.

Annex

Principles governing international statistical activities

Bearing in mind that statistics are essential for sustainable economic, environmental and social development and that public trust in official statistics is anchored in professional independence and impartiality of statisticians, their use of scientific and transparent methods, and equal access for all to official statistical information, the chief statisticians or coordinators of statistical activities of United Nations organizations and related organizations agree that implementation of the following principles will enhance the functioning of the international statistical system. In doing so, they note the endorsement of these principles by the Committee for the Coordination of Statistical Activities on 14 September 2005; they further recall the adoption by the United Nations Statistical Commission of the Fundamental Principles of Official Statistics at its special session held from 11 to 15 April 1994, and the endorsement by the Commission of the Practical Guidelines for Good Practices in Technical Cooperation for Statistics at its thirtieth session held from 1 to 5 March 1999.

1. **High-quality international statistics, accessible to all, are a fundamental element of global information systems.**

   Good practices include:

   - Having regular consultations with key users both inside and outside the relevant organization to ascertain that their needs are met
   - Periodic review of statistical programmes to ensure their relevance
   - Compiling and disseminating international statistics based on impartiality
   - Providing equal access to statistics for all users
   - Ensuring free public accessibility of key statistics

2. **To maintain the trust in international statistics, their production is to be impartial and strictly based on the highest professional standards.**

   Good practices include:

   - Using strictly professional considerations for decisions on methodology, terminology and data presentation
   - Developing and using professional codes of conduct
   - Making a clear distinction, in statistical publications, between statistical and analytical comments on the one hand and policy-prescriptive and advocacy comments on the other

3. **The public has a right to be informed about the mandates for the statistical work of the organizations.**

   Good practices include:

   - Making decisions about statistical work programmes publicly available
   - Making documents for and reports of statistical meetings publicly available

4. **Concepts, definitions, classifications, sources, methods and procedures employed in the production of international statistics are chosen to meet professional scientific standards and are made transparent for the users.**

Good practices include:

- Aiming continuously to introduce methodological improvements and systems to manage and improve the quality and transparency of statistics
- Enhancing the professional level of staff by encouraging them to attend training courses, to carry out analytical work, to publish scientific papers and to participate in seminars and conferences
- Documenting the concepts, definitions and classifications as well as the data-collection and processing procedures used and the quality assessments carried out and making this information publicly accessible
- Documenting how data are collected, processed and disseminated, including information about editing mechanisms applied to country data
- Giving credit, in the dissemination of international statistics, to the original source and using agreed quotation standards when reusing statistics originally collected by others
- Making officially agreed standards publicly available

5. **Sources and methods for data collection are appropriately chosen to ensure timeliness and other aspects of quality, to be cost-efficient and to minimize the reporting burden for data providers.**

Good practices include:

- Facilitating the provision of data by countries
- Working systematically on the improvement of the timeliness of international statistics
- Periodic review of statistical programmes to minimize the burden on data providers
- Sharing collected data with other organizations and collecting data jointly where appropriate
- Contributing to an integrated presentation of statistical programmes, including data-collection plans, thereby making gaps or overlaps clearly visible
- Ensuring that national statistical offices and other national organizations for official statistics are duly involved and advocating that the Fundamental Principles of Official Statistics be applied when data are collected in countries

6. **Individual data collected about natural persons and legal entities, or about small aggregates that are subject to national confidentiality rules, are to be kept strictly confidential and are to be used exclusively for statistical purposes or for purposes mandated by legislation.**

Good practices include:

- Putting measures in place to prevent the direct or indirect disclosure of data on persons, households, businesses and other individual respondents
- Developing a framework describing methods and procedures for providing sets of anonymous microdata for further analysis by bona fide researchers, maintaining the requirements of confidentiality

7. **Erroneous interpretation and misuse of statistics are to be immediately and appropriately addressed.**

Good practices include:

- Responding to perceived erroneous interpretation and misuse of statistics
- Enhancing the use of statistics by developing educational material for important user groups

8. **Standards for national and international statistics are to be developed on the basis of sound professional criteria, while also meeting the test of practical utility and feasibility.**

Good practices include:

- Systematically involving national statistical offices and other national organizations for official statistics in the development of international statistical programmes, including the development and promulgation of methods, standards and good practices
- Ensuring that decisions on such standards are free from conflicts of interest, and are perceived to be so
- Advising countries on implementation issues concerning international standards
- Monitoring the implementation of agreed standards

9. **Coordination of international statistical programmes is essential to strengthening the quality, coherence and governance of international statistics, and avoiding duplication of work.**

Good practices include:

- Designating one or more statistical units to implement statistical programmes, including one unit that coordinates the statistical work of the organization and represents the organization in international statistical meetings
- Participating in international statistical meetings and bilateral and multilateral consultations whenever necessary
- Working systematically towards agreements about common concepts, classifications, standards and methods
- Working systematically towards agreement on which series to consider as authoritative for each important set of statistics
- Coordinating technical cooperation activities with countries so as to avoid duplication of effort and to encourage complementarities and synergy between donors and between different organizations in the national statistical system

10. Bilateral and multilateral cooperation in statistics contributes to the professional growth of the statisticians involved and to the improvement of statistics in the organizations and in countries.

Good practices include:

- Cooperating and sharing knowledge among international organizations and with countries and regions to further develop national and regional statistical systems
- Basing cooperation projects on user requirements, promoting full participation of the main stakeholders, and taking account of local circumstances and the stage of statistical development
- Empowering recipient national statistical systems and Governments to take the lead
- Advocating the implementation of the Fundamental Principles of Official Statistics in countries
- Setting cooperation projects within a balanced overall strategic framework for national development of official statistics

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Development indicators

Report of the Secretary-General

Summary

The present report describes the results of an assessment conducted by the United Nations Statistics Division of countries' capacity to produce the Millennium Development Goals indicators. This analysis was conducted at the request of the Statistical Commission at its thirty-sixth session.[a] The Commission is invited to comment on the methodology and the results.

The report also contains a brief update on the ongoing work of the Inter-agency and Expert Group on Millennium Development Goals Indicators in 2005 in the following areas: compilation and analysis of the indicators; review of methodologies related to the agreed indicators; coordination of data collection at the global level; coordination and support to countries in the compilation and analysis of indicators at the national level; and preparation of analysis and reporting on progress towards the Millennium Development Goals. The Commission is invited to comment on progress made by the Inter-Agency and Expert Group on Millennium Development Goals indicators and on future directions of work.

[a] *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24), chap. VI.A, para. 13 (f).

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Introduction

1. With the adoption of the United Nations Millennium Declaration[1] in 2000, a system of monitoring and reporting was developed to track progress made over time. The reporting system is based on a set of goals, targets and indicators, defined as the Millennium Development Goals framework.[2] The assessment of progress is based on aggregate figures and is used at the global level to inform and help focus the global discussion on the development goals.

2. The global monitoring is based on data series compiled by specialized international organizations responsible for the different areas covered by the Millennium Development Goals. The work is undertaken through the Inter-agency and Expert Group on Millennium Development Goals Indicators, coordinated by the United Nations Statistics Division of the Department of Economic and Social Affairs of the United Nations Secretariat (see annex I for details). At the national level, the framework is adapted to national circumstances and policy priorities and is used to track progress made within the country. At present, out of 191 Member States, 149 countries have produced at least one national report, for a total of 176 reports, covering a wide range of indicators (see annex II for details). Out of the 43 countries yet to produce a report, 12 are developed countries and 31 are developing countries, of which as many as 19 are small island developing States.

3. Since the first annual report on progress achieved in respect of the Millennium Development Goals (A/57/270 and Corr.1) was submitted to the General Assembly in 2002 at its request, shortcomings in the available data have become a preoccupation of both the international statistical community and the international organizations mandated to provide the aggregate figures. The Statistical Commission, at its thirty-sixth session, in March 2005, requested that a report be prepared regularly on the ability of countries to produce individual indicators.[3] It also raised issues on how metadata should be presented to accompany the indicators.

4. The present report presents the analysis carried out by the United Nations Statistics Division of countries' capacity to produce Millennium Development Goals indicators on the basis of data available in its database as of November 2005.

I. Millennium Development Goals global reporting

5. Since 2001, the Inter-agency and Expert Group on Millennium Development Goals Indicators, composed of experts from international organizations and national statistical offices, has produced yearly the aggregate data and analysis on progress towards achieving the Millennium Development Goals. These results appear in the Secretary-General's report to the General Assembly on the implementation of the United Nations Millennium Declaration, with a fuller version available on the Internet.

6. The United Nations Statistics Division maintains the website of the Inter-agency and Expert Group (http://millenniumindicators.un.org/unsd/mi/mi_goals.asp), which contains documents and reports of its regular meetings and background material and reports of its thematic subgroups. In addition, the Statistics Division maintains the Millennium Development Goals database — accessible on the Internet — containing the data used for the analysis on progress towards achieving

the Millennium Development Goals, including the aggregated data at the regional level and the country data series as provided by the international organizations.

7. The global monitoring is based on regional and subregional figures obtained generally through weighted averages of country data, using the population of reference as weights. In order for the data to be comparable and be aggregated to the regional and/or subregional level, the country data used are those available in international sources. For each indicator, the Executive Office of the Secretary-General has designated one or more organizations to be the data providers and lead the data and methodological developments.

8. In some cases, the designated organization is also the office responsible for gathering the data from national statistical systems through a regular mechanism of periodic data collection (usually questionnaires). This is the case for data collected by the International Labour Organization (ILO) from labour ministries and national statistical offices on labour-force indicators; administrative records and household survey data gathered by the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics from ministries of education and national statistical offices; and administrative records gathered by the World Health Organization (WHO) from health ministries for some of the major diseases.

9. In other cases, the designated organizations compile data collected mainly through surveys sponsored and, in some cases, carried out by the international organization itself. This is the case for data compiled by the United Nations Children's Fund (UNICEF) in collaboration with WHO, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the Population Division of the United Nations Secretariat for most of the health indicators, including child malnutrition and the under-five mortality rate.

10. In the global monitoring and reporting of progress towards the achievement of the Millennium Development Goals, regional and subregional figures on the official indicators are supplemented by additional indicators (background indicators) and by greater in-depth analysis of some variables, across socio-economic groups, to help policymakers understand the links across the various areas covered by the goals and the underlying factors.

II. Assessment of country capacity

A. Methodology

11. For this analysis, the capacity of countries to collect data and produce Millennium Development Goals indicators was assessed by the Statistics Division through a two-step process. First, country data available to international organizations and contained in the Millennium Development Goals database maintained by the Statistics Division were reviewed. The data were those compiled by each of the specialized agencies, within their area of expertise, from data provided by national Governments to the international statistical system. In some cases, countries might have had more recent data that had not yet become available to the specialized agency in question. This means that although a country may have produced yearly data for an indicator, for various reasons the data was not reported to the responsible international organization. The given country will therefore be

regarded as having no data. In this case, the country was classified, in the first step of the review, as "lacking in capacity" for that specific indicator.

12. In the second phase, the results of the analysis described above were reviewed by national statistical offices through direct consultations in meetings and by sending a copy of the analysis to the statistical offices of the 191 United Nations Member States for their comments and corrections.[4] The results of the analysis were also reviewed by national statisticians in two main forums: the Inter-agency and Expert Group Meeting held in Rome on 26 and 27 October 2005, attended by 14 representatives of national statistical offices, and the meeting with all national statistical offices from the Economic Community of West African States (ECOWAS) region held in Cape Verde in December 2005. The results of the second phase will be summarized in a room document to be distributed at the thirty-seventh session of the Statistical Commission in March 2006.

13. The review of countries' coverage includes almost all Millennium Development Goals indicators. Table 1 describes the few exceptions and the reasons for their exclusion.

Table 1
Indicators not covered in the analysis

Indicator	*Reason for exclusion*
38. Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty	No country-level data in the United Nations Statistics Division database
39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries	No country-level data in the United Nations Statistics Division database
42. Total number of countries that have reached their heavily indebted poor countries (HIPC) decision points and number that have reached their HIPC completion points (cumulative)	There are no country-level data for this indicator. It measures the total number of countries that have reached HIPC decision/completion points in a cumulative manner
46. Proportion of population with access to affordable essential drugs on a sustainable basis	No country-level data in the United Nations Statistics Division database
26. Ratio of area protected to maintain biological diversity to surface area	No information on "nature/origin" of data source

14. The analysis is summarized in tables A, B and C which are available for public access from the Millennium Development Goals website mentioned in paragraph 6 above. Taken together, these three tables provide a picture of the countries' capacity

to supply data to international organizations for the Millennium Development Goals monitoring exercise. The "supply of data" is used as a "proxy" to assess the "capacity to produce" the indicators. The countries are shown in the rows of the tables while indicators are shown in the columns. The number or code in the cell (intersection of each row and column) of the tables represents the data availability and type of source of a given indicator in a given country.

15. Table A presents the number of "country data points" available in the United Nations Statistics Division database by country and indicator since 1990. Only data deriving from national sources are counted. If a given country presents a combination of country data and agency estimates for an indicator, only the country data are counted. If only one data point is available for a country/indicator and this is an estimate by the designated international agency, the number "0" is assigned to the country.

16. Table B presents the "nature/origin" of the data stored in the United Nations Statistics Division database. For each country and indicator, it shows the following codes:

- "C", which indicates that the figure available in the database is derived from national data/estimates
- "CM", which indicates that the available figure is derived from national data "adjusted or revised" by the designated international organization
- "E", which indicates that the available figure is estimated by the designated international organization
- ".", which indicates that no information is available
- "na", which indicates that the indicator is not relevant in a given country.

Countries presenting a combination of country data and organization estimates for an indicator are coded "CM". If only one data point is available for a country/indicator and this has been estimated by the organization, the country is coded "E".

17. Table C presents the latest available year for each country/indicator available in the United Nations Statistics Division database.

B. Accuracy and limitations of the analysis

18. It is important to note that for some indicators, data are derived from surveys sponsored and carried out by international organizations — such as the Multiple Indicator Cluster Surveys (MICS) and the Demographic and Health Surveys (DHS). Countries relying only on these data sources to monitor Millennium Development Goals progress should not be regarded as having capacity when the degree of involvement of the national statistical system in the production of data is limited. However, although this distinction is crucial, at this first stage, the necessary information on the exact level of country involvement and ownership of such data was not available and the Friends of the Chair Group accepted the approximation of considering international surveys at the same level as any other national sources.

19. The Friends of the Chair Group had expressed the need for the analysis to distinguish between "data slightly modified" by the responsible organization from

"data subject to a more drastic revision". However, the Group agreed that, at this stage, the information available from the organizations did not allow for such a distinction. At the last meeting of the Inter-agency and Expert Group on Millennium Development Goals Indicators, all organizations agreed to provide the Statistics Division with detailed metadata according to a common framework. The framework had been developed by the Statistics Division and circulated for final approval to the organizations, all of which committed to providing the metadata on the indicators under their responsibility by 15 February 2006. A copy of the framework is attached for information (annex III).

20. The assessment of the availability of trend data is based on the assumption that "any" two points in time since 1990 are sufficient for a trend analysis. The analysis therefore does not provide an assessment of data availability around significant benchmark years (1990 and 2000 or latest available).

21. It is important to note that the information in table A needs to be interpreted carefully. In general, it is better to have more observations but whether indicators are measured (frequently) seems to depend on, to a large extent, their relevance to country circumstances (besides countries' capacity to measure these indicators). The World Bank has recently looked into the correlation between the number of observations, for each Millennium Development Goals indicator, and countries' income level (excluding indicators 33-43 in Goal 8) and found some interesting patterns. For example, the availability of indicators 4 and 5 (prevalence of children underweight under 5 years of age and proportion of population below minimum level of dietary energy consumption) decreases as countries move to a higher income level, while the availability of indicators 11 and 28 (b) (share of women in wage employment in the non-agricultural sector and consumption of ozone-depleting chlorofluorocarbons) increases as countries move to a higher income level. This contrast seems to indicate that countries at different development stages measure different indicators because they focus on different development issues. Therefore, in determining countries' capacity to measure Millennium Development Goals indicators, policy relevance may need to be considered in conjunction with data availability.

C. Analysis of the results

22. When looking at the *distribution of countries by availability of data per indicator*, a first result to be noted is that a relatively large group of countries (40 countries) have at least two data points for only 20 indicators or less (out of 60 indicators). The largest group of countries (93) has at least two data points for 21-30 indicators. This means that 133 countries have at least two data points for only half of the indicators being monitored (see table 2 which summarizes country capacity to produce data for the Millennium Development Goals indicators).

Table 2
Distribution of countries and territories by number of indicators on which trend analysis is possible

Number of indicators with at least two data points	*Number of countries*	*Percentage of countries*
1-10	4	2
11-20	36	19
21-30	93	48
More than 30	58	30
Total countries	**191**	**100**

23. Moving to the analysis of the tables from the indicators perspective, a two-step process was undertaken:

(a) First, table A was analysed. Table A presents the number of data points produced by countries and available in the United Nations Statistics Division database by country and indicator since 1990 (see para. 15). Indicators were ranked on the basis of (i) country coverage (number of countries having at least a data point for each indicator) and (ii) countries' capacity to conduct trend analysis (number of countries with at least two data points since 1990 for each indicator) (see tables 3 and 4 below for the results). This exercise was useful to highlight indicators where most of the countries had capacity to produce the necessary data as well as more problematic indicators for which data were sporadic (only for few countries) or not consistently available over time (hence trend analysis could not be undertaken) (see paras. 24-26 for more details).

Table 3
Distribution of indicators by availability of country data points since 1990

	Number of indicators in the group	*Percentage of indicators*
Group 1: at least 2 data points (indicators based on at least 2 data points for 80-100 per cent of countries)	19	32
Group 2: only 1 data point (indicators based on 62-99 per cent of countries' data but for only one data point)	6	10
Group 3: at least 2 data points for a subgroup of countries only (indicators based on at least 2 data points for only 39-75 per cent of countries)	11	18
Group 4: missing values (only from 3-37 per cent of countries' data)	9	15
Group 5: mixture (indicators based on different levels of availability of country data points)	15	25
Total indicators	**60**	**100**

Table 4
Grouping of indicators according to availability of countries' and trend data

Percentage of countries with trend data (2 or more data points since 1990)	*Percentage of countries with "country" data*			
	3-38	*39-61*	*62-79*	*80-100*
80-100				34, 33b, 33a, 14, 13, 47a, 15, 48b, 47b, 12, 35, 25, 24a, 24b, 44, 23a, 41, 9a, 28b (group 1 = 19 indicators)
59-79			7b, 27, 5 (group 3 = 3 indicators)	6, 30a, 31a, 11, 30b, 31b, 9b (group 5 = 7 indicators)
21-58		40, 48a, 36, 45, 23c, 37, 10, 8 (group 3 = 8 indicators)	16, 9c, 19c, 19, 4, 2, 1, 7a (group 5 = 8 indicators)	
1-20	23b, 32, 19a, 19b, 22a, 22b, 20, 18, 28a (group 4 = 9 indicators)			
0 (1 data point only)			43, 17, 3, 29 (group 2 = 4 indicators)	21b, 21a (group 2 = 2 indicators)

Note: Distribution of countries according to their capacity to produce the necessary Millennium Development Goals data at least once since 1990.

(b) Second, table B was analysed. Table B presents the nature/source of data stored in the Millennium Development Goals indicators database maintained by the United Nations Statistics Division and its analysis identified indicators based mainly on country data (coded "C" and "CM" in the table) versus indicators based primarily on international organizations' estimates (coded "E" in the table) (see para. 16 above for more details).

24. The analysis of table A on the number of country data points available per indicator reveals the presence of several groups of indicators (see tables 3 and 4):

- Group 1 (19 indicators), which is characterized by indicators based on countries' data and for at least two data points since 1990 (from 80 to 100 per cent of countries have country data available)
- Group 2 (6 indicators), which consists of indicators with only one data point since 1990 for most countries. Trend analysis for this group of indicators will not be possible
- Group 3 (11 indicators), which is also characterized by indicators with a minimum of two data points since 1990, but only for a subgroup of countries (between 39 and 75 per cent of countries)

- Group 4 (9 indicators), which contains indicators with very few country data (from 3 to 37 per cent of countries with data)
- Group 5 (15 indicators), which encompasses the remaining indicators

More information on these groups and related indicators is available on the aforementioned Millennium Development Goals website for public access.

25. The analysis of table 4 helps identify areas where statistical capacity is more needed. For example, it is evident that the set of indicators in group 4, for which very few countries have data, are mainly *indicators on diseases*. However, a distinction needs to be made when looking at implications for statistical capacity-building. Some of these indicators are derived from regular data-collection programmes, such as the information on tuberculosis prevalence (23 (b)) and tuberculosis death rates (23 (c)) that are obtained from health information systems based on vital registration, while others are obtained from internationally sponsored household surveys. The second type of indicators includes, for instance, the behavioural indicators on HIV/AIDS.

26. At the other extreme of table 4, the indicators under group 1, for which most countries have data, are mainly characterized by: (a) indicators for Goal 8 such as official development assistance (ODA) tracked only from the donors' angle (Organization for Economic Cooperation and Development (OECD) countries); (b) indicators for Goal 8 obtained from line ministries producing official statistics like the indicator on telephone lines (47 (a) and (b)), and indicators on seats in national parliament held by women (12); (c) indicators for Goal 4: child and infant mortality and immunization against measles (13, 14, 15); (d) indicators to monitor coverage and success rate for DOTS (the internationally recommended tuberculosis control strategy of WHO), for which data are obtained through national/WHO health systems rather than through the national statistical office; and (e) indicators meant to be used mainly at the aggregate level such as those for Goal 7: forest; consumption of chlorofluorocarbons. Apart from the indicators for Goal 4 on child mortality which are based on "routine" data-collection initiatives and have been monitored for decades, all the other indicators in this group are obtained from administrative data sources that are not directly under the responsibility of national statistical offices. This highlights the importance of making a better use of administrative records in order to improve data availability for national statistical systems in general, including for the Millennium Development Goals monitoring needs.

27. As for the analysis of table B on the type of data sources that have generated country-level data stored in the United Nations Statistics Division database, it reveals the presence of five groups of indicators (see table 5). Fifteen indicators (corresponding to 25 per cent of the total list of Millennium Development Goals indicators) are mainly based on data produced by countries (more than 70 per cent of country data). Values for these indicators in the Millennium Development Goals database maintained by the United Nations Statistics Division should be identical to those available in countries' Millennium Development Goals databases. Eighteen indicators (corresponding to 30 per cent of the total) are mainly based on data produced by countries that are subsequently adjusted by the specialized organizations for international comparison purposes and to obtain regional estimates (from 63 to 100 per cent of data adjusted/revised by international organizations). Values for these indicators in national and international databases could differ.

Three indicators (corresponding to 5 per cent of the total) have a strong component of international organizations' estimates (between 76 and 87 per cent of estimates). This can be due to the lack of capacity in many countries to produce data for these indicators or to the lack of reporting mechanisms for data exchange from national to international statistical systems. More information on these groups of indicators is available on the Millennium Development Goals website for public access.

Table 5
Distribution of indicators by type of data source

	Number of indicators in group	*Percentage of indicators*
Group 1: countries' data ("C", indicators based on more than 70 per cent of country data)	15	25
Group 2: countries' data adjusted by international organization ("CM", indicators based on countries' data adjusted/revised by international organizations from 63 to 100 per cent of countries)	18	30
Group 3: organizations' estimates ("E", indicators based on organization estimates from 76 to 87 per cent of countries)	3	5
Group 4: missing values (".", indicators for which from 50 to 93 per cent of countries have no data)	12	20
Group 5: mixture (indicators based on a mixture of data sources)	12	20
Total indicators	**60**	**100**

III. Points for discussion

28. **The Statistical Commission is invited:**

(a) **To comment on the methodology used to assess country capacity to report on the Millennium Development Goals indicators;**

(b) **To provide guidance on which type of assessment would be most useful to the Commission for consideration at future sessions.**

Notes

[1] See General Assembly resolution 55/2.

[2] See the report of the Secretary-General entitled "Road map towards the implementation of the United Nations Millennium Declaration" (A/56/326) of 6 September 2001.

[3] See *Official Records of the Economic and Social Council, 2005, Supplement No. 4* (E/2005/24), chap. VI.A, para. 13 (f).

[4] The analysis was sent to the directors of all national statistical offices on 3 November 2005.

Annex I

Inter-agency work on monitoring progress

I. Seventh meeting of the Inter-agency and Expert Group on Millennium Development Goals Indicators

1. The Inter-agency and Expert Group on Millennium Development Goals Indicators met twice in 2005. The seventh meeting of the Group was held in New York from 25 to 27 January 2005. Sixteen organizations and five regional commissions were represented. The National Statistical Offices of Mexico and China also attended.

2. Based on the inputs provided by the organizations, the Department of Economic and Social Affairs of the Secretariat and the Department of Public Information of the United Nations Secretariat published the *Millennium Development Goals Report 2005*.* The report was launched in June 2005 by the Secretary-General, and used to inform the political debate at the 2005 high-level segment of the Economic and Social Council in July and at the 2005 World Summit in September. Globally, 35,000 copies have been distributed and the report is currently being reprinted.

3. The United Nations Statistics Division also issued the Internet publication entitled "Progress towards the Millennium Development Goals 1990-2005", and prepared data and analysis to inform the 2005 report of the Secretary-General entitled "In larger freedom: towards development, security and human rights for all" (A/59/2005 and Add.1-3). The Statistics Division has also continued to maintain the website and database on Millennium Development Goals (http://millenniumindicators.un.org).

II. Eighth Meeting of the Inter-agency and Expert Group on Millennium Development Goals Indicators

4. The eighth meeting of the Inter-agency and Expert Group on Millennium Development Goals Indicators was held in Rome on 24 and 25 October 2005 and was attended by 45 experts from 18 organizations and 4 regional commissions; and on 26 and 27 October and was attended by 17 representatives of national statistical offices from 14 countries, 45 experts from 18 organizations and 4 regional commissions, 2 representatives of donor organizations and a representative of the European Commission.

5. The first two-day part of the meeting:

- Reviewed the major outcomes of the 2005 World Summit
- Took note of the proposed revisions in the list of Millennium Development Goals Indicators presented by the chairs of the subgroups on poverty and hunger, employment, gender, slums, and health indicators

* United Nations publication, Sales No. E.05.I.16.

- Discussed plans and timeline for the final revision of the list of indicators to be used for the global/regional monitoring of progress achieved towards the Millennium Development Goals
- Agreed to establish three committees composed of selected members of the Inter-Agency and Expert Group to make proposals on: (a) the revision of the handbook on Millennium Development Goals Indicators, (b) the restructuring of the Millennium Development Goals global database and website and (c) the reporting outputs for 2006
- Discussed plans for the next meeting of the Inter-agency and Expert Group to be held tentatively in March 2006 with the main objectives of agreeing on the official Millennium Development Goals list of indicators for global/regional monitoring and of discussing countries' priorities in data collection and compilation related to Millennium Development Goals indicators

6. The second two-day part of the meeting, attended by the representatives of national statistical offices, focused more on countries' needs and perspectives. In particular, it was aimed at improving the understanding of countries' needs in building capacity for the production and analysis of Millennium Development Goals and development indicators; facilitating the coordination of technical assistance activities; and strengthening the link between global and national monitoring.

7. The second part of the meeting:

- Reviewed the major results of the analysis on countries' capacity to monitor Millennium Development Goals indicators undertaken by the United Nations Statistics Division, under the guidance of the Friends of the Chair Group, on the basis of international data series stored in the global Millennium Development Goals indicators database maintained by the Statistics Division
- Discussed ways to improve the analysis prepared by the United Nations Statistics Division and strengthen the interaction between the national and international statistical systems
- Took note of countries' experiences in building statistical capacity and in using statistics for advocacy and policymaking and monitoring, and of their recommendations in this area
- Took note of initiatives supported by international organizations to facilitate the strengthening of countries' statistical capacity
- Agreed on priorities in statistical capacity-building for the production and use of development indicators and on recommendations to improve the effective delivery of technical assistance and the coordination of support at the national and international levels

Actions undertaken to improve the international database and related metadata

8. The results of the analysis prepared by the United Nations Statistics Division of data availability in the Millennium Development Goals database were presented at the meeting. The Group discussed the concerns emerging from the analysis and the implications for data-collection modalities and estimation methods, as well as

for needs to strengthen statistical capacity at national level (the outcome and recommendations on statistical capacity-building are presented in detail in the report of the Secretary-General on statistical capacity-building (E/CN.3/2006/27).

9. In addition, in response to the concerns raised by the Friends of the Chair Group, a committee of international organizations and countries was established to provide advice and suggestions to the United Nations Statistics Division during its thorough revision and restructuring of the Millennium Development Goals database, its metadata and the overall Millennium Development Goals website.

I. Improving data reporting and metadata

10. The meeting of the Inter-agency and Expert Group addressed the following questions: (a) whether or not the exercise carried out by the United Nations Statistics Division adequately reflected the situation in countries; (b) ways to improve reporting mechanisms from countries to organizations; and (c) identification of problematic indicators/areas where statistical capacity-building was more urgently needed.

11. It was agreed that there were two main issues that needed to be addressed by the international data providers: the existence of discrepancies in data available at the national level versus data in international series; and differences between figures presented in international series and data available at the country level.

12. The first problem relates to the modalities used by international organizations to collect data from countries and also depends on the level of coordination of national statistical systems within the country. The second question is related to the way international organizations prepare their estimates and the modalities they use to consult with national statistical authorities on the verification of estimated figures. All partner agencies agreed they would provide a description of the mechanisms they had in place to gather data from countries, their methods to ensure comparability across countries and to fill in data gaps, and modalities of consultation with national statistical authorities. This will be the first step in a process designed to address the concerns raised, identify ways to improve data reporting from countries and reduce discrepancies between national and international sources.

13. Participants agreed that the tables presented in the United Nations Statistics Division analysis were a very useful basis for stimulating the dialogue between national statistical offices and international organizations on ways to improve the use of national official statistics in international sources and reduce discrepancies between data used and published at the national and international levels.

14. The main outcomes of the discussion comprised the following observations:

- Countries found the mechanism of reporting to international organizations not always effective and adequate
- Problems with reporting to international organizations were linked to the lack of coordination within countries among the various statistical organizations (administrative data from line ministries, national statistical offices, etc.)
- In some cases, international experts visited countries with the main intent of gathering data and no real commitment to providing technical assistance

- Indicators in countries often differed from what was available in international sources, because of different national policy priorities. One useful example was given: the use of an indicator on dichlorodiphenyltrichloroethane (DDT) in South Africa rather than the one used in international monitoring on "insecticide-treated bed nets"

- For most of the Goals, more data are generally available at the national level and used in Millennium Development Goals country reports than those presented in the United Nations Statistics Division database

15. The meeting agreed on the following: (a) agencies needed to improve transparency on how they adjusted country data and why; (b) mechanisms of reporting from national statistical systems to international organizations needed to be improved which implied also improving coordination within national statistical systems; (c) the calculation of indicators at the national level should be driven by national policy priorities; and (d) there was still a need for further training of national statisticians on the production of the indicators.

16. In respect of the analysis prepared by the Statistics Division, the meeting agreed on the following: (a) the title of the tables/analysis should be changed, given that they did not entirely reflect countries' capacity but rather availability of country-level data in international sources/databases; (b) the degree of organizations' adjustments to the data classified with the code "CM" used in table II should be clarified ("CM" indicates country data adjusted by agency to allow international comparison); (d) the need for more accurate assessment of the quality of country data for Millennium Development Goals indicators; (e) a third table (table III) presenting the latest available year per country/indicator should be added; and (f) the code "na" (not applicable) should be further applied when appropriate. It was also recommended to present countries' feedback to the Statistics Division assessment on the basis of selected case studies showing possible discrepancies, in respect of countries' capacity, between the assessment done by the United Nations Statistics Division and those undertaken by the countries themselves. It was also noted that the information presented in the Statistics Division report on countries' capacity could be supplemented by the assessment of how indicators were presented and analysed in Millennium Development Goals national reports.

17. The Group also discussed ways to improve reporting modalities from the designated organizations to the United Nations Statistics Division, for the annual reporting and for the updating of the database maintained by the Statistics Division. The Group agreed that organizations would always provide the metadata along with the data series submitted for inclusion in the database. All organizations would provide the United Nations Statistics Division with the metadata according to an agreed framework.

2. Revision of the database and restructuring of the website

18. The meeting also reviewed shortcomings in the current structure and layout of the website and database and suggested possible improvements. The United Nations Statistics Division has already initiated the redesigning of the website and database and a prototype has been developed for review and suggestions by the Group committee for the revision of the database and website. A complete revision of the metadata presented in the database is ongoing.

Annex II

Preparation of Millennium Development Goals national reports

1. An essential component of the monitoring of the Millennium Development Goals is represented by the preparation of national reports. The United Nations Development Programme (UNDP) is the lead agency in this work and has assisted country Governments and Millennium Development Goals United Nations country teams in the preparation and dissemination of their reports, through training and financial support.

2. The country reports are primarily oriented towards national advocacy and public dialogue on Millennium Development Goals. Millennium Development Goals national reports have now been produced in 149 countries for a total of 176 reports. Out of the 43 countries yet to produce a report, 12 are developed countries, and 31 are developing countries, of which as many as 19 are small island developing States. In most countries, the reports have been useful in raising awareness of the development goals and the commitments made by Governments with respect to the United Nations Millennium Declaration and have helped promote the production and use of statistics for policymaking and monitoring. Several countries have produced their second and third reports (Afghanistan, Albania, Armenia, Azerbaijan, Bolivia, Brazil, Brunei Darussalam, Cambodia, Cuba, Denmark, Djibouti, Egypt, the Gambia, Kazakhstan, Kenya, Lithuania, Mauritius, Nepal, Panama, the Philippines, Senegal, the Syrian Arab Republic and Viet Nam). The quality of Millennium Development Goals reports is increasing, in terms of both process and product, as countries acquire more experience. In particular, the reports are increasingly presenting data disaggregated across geographical regions and by sex. UNDP has conducted a review of best practices in monitoring and reporting, compiled in the report entitled *MDG Monitoring and Reporting: A Review of Good Practices* (UNDP, August 2005). The report also includes a CD-ROM compiling all available Millennium Development Goals reports. Country reports are also available at the UNDP Internet site (http://www.undp.org/mdg/countryreports.html).

3. In addition to national reports, regional reports have been produced by several regional and subregional organizations: five in Latin America and the Caribbean, one in the Arab States, one in Africa, two in Asia and the Pacific, one in Central Europe and one by the European Union.

Annex III

Inter-agency and Expert Group on Millennium Development Goals Indicators committee for the revision of the Millennium Development Goals website and metadata maintained by the United Nations Statistics Division

1. As agreed at the eighth meeting of the Inter-agency and Expert Group in Rome, the United Nations Statistics Division, together with selected Group members, has been undertaking a major revision of its Millennium Development Goals website and database (mainly in the way data and metadata are collected, stored and presented by the Statistics Division).

Millennium Development Goals indicators website

2. On 15 November 2005, a new prototype for the Millennium Development Goals indicators website was posted in a password-protected website accessible by the members of the Committee. The new prototype represents a major shift in approach and style. As opposed to the current site (http://millenniumindicators.un.org/unsd/mi/mi_goals.asp), which is based on static subject domains, the new version is based on a dynamic chronological display of information known as the web log or "blog".

3. Instead of being composed of many individual pages connected by hyperlinks, the blog is composed of a few templates into which content is fed from a database. This application provides many advantages over traditional sites, including:

- Allowing for easy creation of new pages, since new information is entered into a simple form (usually with title, category, and the body of the article) and then submitted. A new article is then added to the home page, creating the new full-article page, and to the appropriate date- or category-based archive;
- Allowing for easy filtering of content for various presentations, such as by date, category, author or other attributes;
- Allowing the administrator (the case for most blog platforms) to invite and add other authors, whose permissions and access are easily managed.

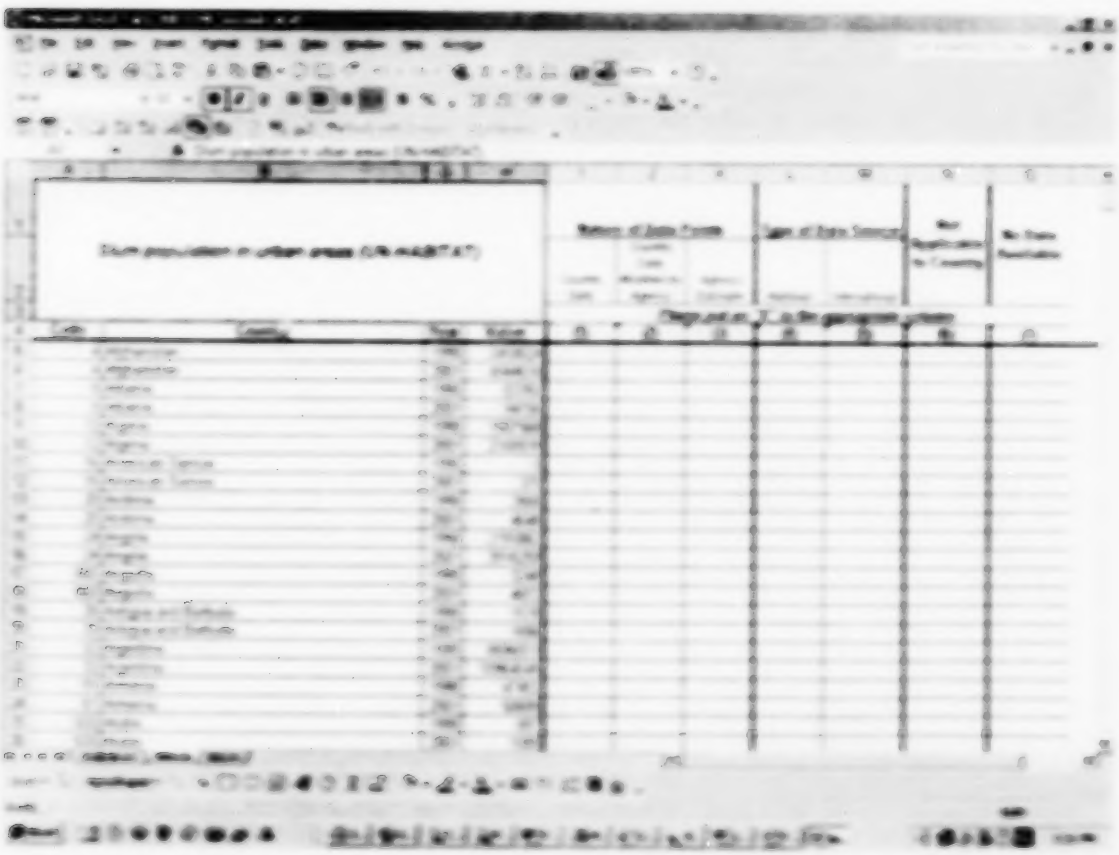
4. Another important feature of the new website will be the use of RSS feeds, which enable users to be immediately notified when new information is available on a website. A program known as a feed reader or aggregator can check RSS-enabled web pages on behalf of a user and display any updated articles that it finds. It is now common to find RSS feeds on many websites. Web-based feed readers and news aggregators require no software installation and make the user's "feeds" available on any computer with Web access.

Metadata structure

5. Currently the Millennium Development Goals database, as part of the United Nations Common Database, allows for storage only of data and footnotes. The only other metadata available are general in nature, such as an overall source for the whole indicator, and some broad definitions. This does not allow a separation of structural cell-level metadata from occasional footnotes, neither in terms of storage (through the United Nations Common Database) nor in terms of presentation (through the Millennium Development Goals website).

6. In order to accommodate users' requests for more extensive and structured metadata and as agreed by the Group in Rome, several changes will be implemented in the Millennium Development Goals database. A major improvement proposed is the use of a standard format to "receive" Millennium Development Goals data series from data providing organizations. To this end, a standard form for the reporting of data and metadata by designated organizations to the United Nations Statistics Division has been designed (see table below).

Standard form to be used by agencies when submitting new data and metadata



7. The left part of the form presents the data values ordered by country, indicator and year. The right part presents seven columns in which to indicate the "nature" of the data points and the "type" of data source.

8. The first three columns (1, 2 and 3) focus on the nature of the data/estimate stored in the United Nations Statistics Division database. A check mark will be placed in one of these columns as follows:

1. Country data: if the data/statistics have been collected/estimated by the country itself and simply reported by the specialized organization to the United Nations Statistics Division.

2. Country modified: if the data/statistics have been collected/estimated by the country but adjusted or modified in some way by the reporting organization.

3. Agency estimate: if the data are organizations' estimates with no direct national inputs.

9. The next two columns (4 and 5) are used to identify the type of data source used as either national or international. A check mark will be placed in one of these columns as follows:

1. National: the data source (survey, census, administrative records etc.) is nationally based and/or sponsored.

2. International: the data source is internationally based and/or sponsored.

10. The final two columns (6 and 7), will be used by the responsible organization when no data are available (check mark in column 7) or when the indicator is not relevant (check mark in column 6) in a given country, as follows:

1. Not applicable to country: the indicator does not apply to the particular country.

2. No data available: the indicator is applicable to the country but no data are available from either the country or the organization.

11. Designated organizations will be responsible for:

(a) Providing the requested metadata for existing data in the United Nations Statistics Division database by inserting an "X" in the appropriate columns in the form attached (each organization will receive a set of forms, one per indicator, containing an extraction of what is currently available in the Statistics Division database);

(b) Providing new data and related metadata by adding rows to countries where needed (for example, where new data points/years are available);

(c) Marking columns 6 and 7 to "identify" countries where the indicator is not relevant/applicable (column 6) and countries missing data (column 7);

12. In addition, data providers will prepare a methodological/technical note describing the calculation of each of the indicators under their responsibility, specifying: data sources, method of computation, assumptions and limitations of the estimates. This note on metadata will be posted in the Millennium Development Goals database, attached to the appropriate indicator, and will link to additional metadata available on the data provider's website.

Annex IV

Millennium Development Goals, targets and indicators

Goals and targets (from the Millennium Declaration)	*Indicators for monitoring progress*
Goal 1: Eradicate extreme poverty and hunger	
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1. Proportion of population below $1 purchasing power parity (PPP) per day[a] 2. Poverty gap ratio (incidence x depth of poverty) 3. Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children under five years of age 5. Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrolment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5[b] 8. Literacy rate of 15-24-year-olds
Goal 3: Promote gender equality and empower women	
Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	9. Ratios of girls to boys in primary, secondary and tertiary education 10. Ratio of literate women to men, 15-24 years old 11. Share of women in wage employment in the non-agricultural sector 12. Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 5: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate 14. Infant mortality rate 15. Proportion of 1-year-old children immunized against measles
Goal 5: Improve maternal health	
Target 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel
Goal 6: Combat HIV/AIDS, malaria and other diseases	
Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	18. HIV prevalence among pregnant women aged 15-24 years 19. Condom use as a percentage of the contraceptive prevalence rate[c] 19a. Condom use at last high-risk sex

Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
	19b. Percentage of population aged 15-24 with comprehensive correct knowledge of HIV/AIDS[a]
	19c. Contraceptive prevalence rate
	20. Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14
Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria
	22. Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures[a]
	23. Prevalence and death rates associated with tuberculosis
	24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course (DOTS) (internationally recommended tuberculosis control strategy)
Goal 7: Ensure environmental sustainability	
Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	25. Proportion of land area covered by forest
	26. Ratio of area protected to maintain biological diversity to surface area
	27. Energy use (kilogram oil equivalent) per $1 gross domestic product (PPP)
	28. Carbon dioxide emissions per capita and consumption of ozone-depleting chlorofluorocarbons (ODP tons) and ozone-depleting potential (ODP) tons)
	29. Proportion of population using solid fuels
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	30. Proportion of population with sustainable access to an improved water source, urban and rural
	31. Proportion of population with access to improved sanitation, urban and rural
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum-dwellers	32. Proportion of households with access to secure tenure
Goal 8: Develop a global partnership for development	
Target 12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system Includes a commitment to good governance, development and poverty reduction, both nationally and internationally	Some of the indicators listed below are monitored separately for the least developed countries, Africa, landlocked developing countries and small island developing States Official development assistance (ODA)
	33. Net ODA, total and to the least developed countries, as percentage of Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) donors' gross national income
Target 13: Address the special needs of the least developed countries	

Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Includes: tariff- and quota-free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous official development assistance (ODA) for countries committed to poverty reduction	34. Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation)
	35. Proportion of bilateral official development assistance of OECD/DAC donors that is untied
	36. ODA received in landlocked developing countries as a proportion of their gross national incomes
Target 14: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)	37. ODA received in small island developing States as a proportion of their gross national incomes
	Market access
	38. Proportion of total developed-country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty
	39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries
Target 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	40. Agricultural support estimate for OECD countries as a percentage of their gross domestic product
	41. Proportion of ODA provided to help build trade capacity
	Debt sustainability
	42. Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)
	43. Debt relief committed under HIPC Initiative
	44. Debt service as a percentage of exports of goods and services
Target 16: In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	45. Unemployment rate of young people aged 15-24, each sex and total[c]
Target 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	46. Proportion of population with access to affordable essential drugs on a sustainable basis
Target 18: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	47. Telephone lines and cellular subscribers per 100 population
	48. Personal computers in use per 100 population and Internet users per 100 population

Note: The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries, including 147 Heads of State and Governments, in September 2000 (http://www.un.org/millennium/declaration/ares552e.htm). The goals and targets are interrelated and should

be seen as a whole. They represent a partnership between the developed countries and the developing countries "to create an environment — at the national and global levels alike — that is conducive to development and the elimination of poverty". Goals, targets and indicators effective 8 September 2003.

[b] For monitoring country poverty trends, indicators based on national poverty lines should be used, where available.

[c] An alternative indicator under development is "primary completion rate".

[d] Among contraceptive methods, only condoms are effective in preventing HIV transmission. Since the condom use rate is measured only among women in union, it is supplemented by an indicator on condom use in high-risk situations (indicator 19a) and an indicator on HIV/AIDS knowledge (indicator 19b). Indicator 19c (contraceptive prevalence rate) is also useful in tracking progress achieving in other health, gender and poverty goals.

[e] This indicator is defined as the percentage of population aged 15-24 who correctly identify the two major ways of preventing the sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), who reject the two most common local misconceptions about HIV transmission, and who know that a healthy-looking person can transmit HIV. However, since there are currently not a sufficient number of surveys to be able to calculate the indicator as defined above, the United Nations Children's Fund (UNICEF), in collaboration with the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO), produced two proxy indicators that represent two components of the actual indicator. They are the following: (a) percentage of women and men aged 15-24 who know that a person can protect herself/himself from HIV infection by "consistent use of condoms"; (b) percentage of women and men 15-24 who know a healthy-looking person can transmit HIV.

[f] Prevention to be measured by the percentage of children under age 5 sleeping under insecticide-treated bed nets; treatment to be measured by percentage of children under age 5 who are appropriately treated.

[g] An improved measure of the target for future years is under development by the International Labour Organization.